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THE AMERICAN FARMER AND THE "LAST BEST WEST"

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The first two decades of the twentieth century were marked by one of the greatest land rushes in North American history.¹ This was the movement into the Canadian West—called the "last best West" by those who responded to the attraction of free land. While predominantly a movement of peoples from Eastern Canada and Europe, it attracted over a million Americans. The year 1890 and the "passing of the frontier" consequently are seen in a somewhat different perspective when a continental viewpoint is adopted.

The end of the nineteenth century, it is true, saw the passing of good lands within the United States. But land hunger is a relentless force. It had ignored the international line before and was to do so for another, and perhaps last, time on the North American Continent. Good land was to be had in Canada for the taking long after it had been exhausted south of the forty-ninth parallel. That this land lay under the Union Jack and not under the Stars and Stripes made little difference to land-hungry Americans who poured into the Canadian prairies after 1896. This movement was in the best tradition of the frontier, for the westward sweep of settlement had often shuttled across the international boundary, lured on by the existence of unoccupied lands and greater economic opportunities. Into Nova Scotia, across into the Eastern Townships of Quebec, and through Ontario the movement had swept until, diverted by the Laurentian Shield, it had turned south into the United States again.²

The great attraction of the Canadian West was land. Those who could best improve their social and economic positions by leaving their American homes were farmers, land speculators, or men associated with agricultural industries. To deny

the agrarian nature of the American movement into the "last best West" is to pose the question, who but farmers were interested in moving in such numbers into a predominantly agricultural economy?³ Faltering explanations for many developments on both sides of the line have been given by those who have failed to follow the agricultural frontier as it slipped across into Canada.

The nature of a pioneer society is largely determined by the physical environment, the period of settlement, and the cultural heritage of the pioneers. Of these, the most important in many ways in the development of the Prairie Provinces was the geographical setting for settlement. Geographic and climatic position imposed upon the settler a narrowly seasonal occupation and created problems of transportation and marketing which did much to shape the society he labored to create.

The familiar pattern of settlement in which the pioneer sought, so far as possible, lands similar to those left behind was followed in the last great west. Europeans, Canadians, and farmers from the American Middle West favored the Park Belt,⁴ a crescent-shaped area of fertile soils with frequent "bluffs" of trees and tall grasslands stretching from the forty-ninth parallel in Manitoba to the Rockies. In this area sufficient timber, fertile black soil, and an adequate water table permitted the mixed farming familiar to farmers from the Central States.

To the south and enclosed by this arc lay a bulge of the American plains—the dry belt or true plains. Into this treeless semiarid grassland boldly pushed the farmers from the Dakotas, Montana, Nebraska, and Oklahoma. For them the plains represented unlimited opportunities; they were not frightened away by the lack of timber and water.⁵ The settlement of this region strikingly paralleled

¹ This article was read at the meeting of the Agricultural History Society with the American Historical Association in New York City on Dec. 30, 1946.

² These movements are carefully traced in Marcus Lee Hansen and John Bartlet Brebner, *The Mingling of the Canadian and American Peoples* (New Haven, 1940).

³ R. H. Coates and M. C. Maclean, *The American-Born in Canada: A Statistical Interpretation* (Toronto, 1943), 11.

⁴ Leo Thwaite, *Alberta, An Account of Its Wealth and Progress* (London, 1912), 67.

⁵ W. A. Mackintosh, *Prairie Settlement, The Geographical Setting* (Toronto, 1934), 1-26.

the early settlement of Kansas, for each occurred during a period of unusual rainfall which deceived immigrants as to the true character of the two regions. The rush of immigration into Alberta from 1904 to 1910 coincided with a period of rainfall adequate for wheat farming,⁶ so good, in fact, that many who had planned to irrigate their crops never connected their ditches with the main canals.⁷ The result was the transition from ranching to farming and the confinement of the cattle industry to the Cypress Hills and the foothills of the Rockies. Later, of course, there were serious doubts as to the wisdom of breaking the plains, and numerous abandoned farms were eloquent reminders of past mistakes and forsaken hopes.⁸

Settlers in both regions fought nature on two major fronts: extreme temperatures and droughts. Frost was a spectacular enemy and the source of much unfavorable publicity for the Canadian West, but droughts proved to be the more persistent foe. The introduction of rapidly maturing wheat came too late to be an encouraging factor in settlement.⁹ Dry-farming techniques developed on the American plains were of far greater significance. Though the annual precipitation seldom exceeded 15 inches a year, the high percentage of rain during the growing season and the relatively low rate of evaporation, except in southern Alberta, fortunately gave the farmer an advantage not revealed in statistical tables.

Canadians have been puzzled by the long delay in the settlement of the Canadian West. The usual explanations for this retarded development do not tell the whole story. The Riel Rebellion may have blighted the country as some professed to believe, but it is just as reasonable to hold that settlement actually was stimulated by the numerous soldiers who, sent to crush the uprising, saw the possibilities of the land and remained. The explanations centering around the failure of the Canadian Pacific Railway to follow the Fleming route and its failure to send out feeder lines are only partial answers. Dominion land policy which reserved almost half the available lands unquestionably discouraged settlement, but it is

doubtful if a more liberal policy would have made any appreciable difference in the flow of immigration. Even during the years of greatest immigration no genuine homestead philosophy was accepted.¹⁰ The existence of cheap land in the United States was largely responsible for the delay. When land prices began their upward spiral there, the inevitable movement into the Canadian Northwest began.

The movement was inevitable in that land-hungry farmers turned to the unoccupied and promising lands to the north as soon as cheap lands which did not require new and unfamiliar techniques of farming, such as irrigation, disappeared in the American West. After 1898 they turned in increasing numbers to this new Promised Land, and, both in terms of population and wealth, the magnitude of the exodus to Canada impressed contemporary observers.¹¹ Even *Puck* magazine considered the "American invasion" significant enough for comment in editorial and cartoon. In one particularly effective cartoon for example, *Puck* portrayed an English traveler in conversation with a "Canadian." "Eh—ah—er," said the gentleman. . . making those preparatory sounds by which the Briton warns the world of his intention to speak, 'jolly little place this Canada—and all that sort of rot. Kindly feelings toward you Colonials, too—quite so. But have you a tap-room or an inn where a chap can get a pint of ale and a finnan haddie?' The Canadian scratched his head. 'Well, now, I dunno. Up to the Washin'ton Hotel, though, you kin git some Chicago ham and Milwaukee beer and New York crackers. I'm from Ioway myself—just moved North last winter—but I'm glad to see you, even if you be English. Who's king over in your country now?'"¹²

The estimates of the total number of Americans who made the trek into western Canada vary widely. Not only are immigration statistics inadequate, but the casual manner in which settlers crossed the international line without bothering with the formalities of customs must also be considered. With this in mind, Canadian officials thought that at least 20 percent of the immigrants from the American Republic entered informally and that this percentage must be added to im-

⁶ *Manitoba Free Press*, Sept. 5, 1919.

⁷ Canada Parliament, *Sessional Papers*, 1905, no. 25, pt. 2, p. 78. Hereafter, this source is referred to as *Sessional Papers*.

⁸ Mackintosh, *Prairie Settlement*, 124-130.

⁹ Vernon C. Fowke, *Canadian Agricultural Policy, The Historical Pattern* (Toronto, 1946), 236-237.

¹⁰ *Ibid.*, 180.

¹¹ *Sessional Papers*, 1899, no. 13, p. viii.

¹² Reprinted in *Grain Growers' Guide* (Winnipeg, Manitoba), 6(17):7 (Apr. 23, 1913).

migration statistics.¹³ In 1914 immigration officials estimated that 925,000 persons had entered from the United States,¹⁴ and another estimate for the same year placed the figure at a million.¹⁵ By 1920, therefore, the total number of American immigrants probably numbered well over a million and a quarter.¹⁶

Even more impressive to contemporaries was the flow of wealth which accompanied the population movement across the boundary. The official estimate of the wealth per capita of the settlers was \$1,000,¹⁷ but observers frequently made much higher estimates. The total wealth in cash and property taken into the Canadian West from 1900 to 1920 has been estimated to be from 270 million to a billion dollars.¹⁸ This influx of ready capital, valuable agricultural equipment, and personal property meant that the long and arduous years necessary on most frontiers to create a comfortable living were bypassed by many and were telescoped into a few years by others. The significance of this development was clearly seen by Clifford Sifton, Frank Oliver, and others interested in the development of the Canadian West. Europe could supply raw labor, but only the American West could provide men who were at once capitalists and experienced farmers. No agricultural frontier could have asked for a happier combination.

The army of farmers which was on the move during these years traveled chiefly by rail, though wagon trains, ox carts, and prairie schooners were in evidence. The prairie schooner which had all but disappeared once again became a familiar sight on the plains.¹⁹ Since the trip could be made more cheaply by wagon than by rail, settlers heading north formed caravans comparable to those traditional in American history. A typical caravan was one which left Crawford, Nebraska,

in May 1900 with forty wagons headed for "Alberta or bust." Spare horses and cattle accompanied the caravan, and the whole scene was a "beautiful sight" to the Canadian agent who had induced the people to pull up stakes.²⁰ Wagons were most frequently employed by people who lived in the Dakotas or Montana, for railway connections often involved out-of-the-way routes which were expensive and time consuming. However, settlers from Missouri, Iowa, and Kansas were known to follow the old trail along the Missouri River to Fort Benton and then on into Canada, frequently making a journey of a thousand miles.²¹

Equally as colorful were the trainloads of Canada-bound immigrants which pulled out of Saint Paul, Chicago, Kansas City, and other staging areas. The completion of the "Soo Line" from Saint Paul to Portal in 1894 opened the most popular route to the Northwest, and as early as 1900 a full train of immigrants came from as far away as Kansas City.²² Trains leaving the Middle West often had ten to twenty carloads of stock and equipment, plus five hundred to a thousand immigrants.²³

The influence of railroad construction on settlement and upon the pioneer economy of the Canadian prairies is well known, but it is of particular interest to note that in general the settlers anticipated the railroads and compelled them to follow the areas of settlement.²⁴ American farmers frequently struck out ahead of the railroads, many times going far beyond the distance considered economically profitable to haul grain. The movement into the Peace River country and along the Saskatchewan River may be noted as an example.²⁵

The entrance of the United States into the First World War in 1917 virtually put an end to the northward movement. With the return of peace, however, many Canadians expected to see a resumption of the tide of immigration from the

¹³ *Sessional Papers*, 1900, no. 13, p. 111; 1904, no. 25, pt. 2, p. 95.

¹⁴ *Ibid.*, 1914, no. 25, pt. 2, p. 103.

¹⁵ J. S. Willison, "Immigration and Settlement," in J. O. Miller, ed., *The New Era in Canada* (Toronto, 1917), 109.

¹⁶ *Canadian Annual Review of Public Affairs*, 1920, p. 241.

¹⁷ *Sessional Papers*, 1911, no. 25, p. xxix.

¹⁸ *Canadian Annual Review of Public Affairs*, 1920, p. 242; Agnes C. Laut, "The Last Trek to the Last Frontier," *Century Magazine* (New York), 78:99 (May 1909).

¹⁹ *Sessional Papers*, 1904, no. 25, pt. 2, p. 111.

²⁰ *Ibid.*, 1901, no. 25, pt. 2, p. 164.

²¹ Hansen and Brebner, *The Mingling of the Canadian and American Peoples*, 232, quoting the *Manitoba Free Press*, Apr. 8, 1905.

²² *Sessional Papers*, 1901, no. 25, pt. 2, p. 176.

²³ *Ibid.*, 1899, no. 13, pt. 2, p. 272; 1901, no. 25, pt. 2, p. 175; *Manitoba Free Press*, Mar. 31, 1919.

²⁴ G. P. de T. Glazebrook, *A History of Transportation in Canada* (Toronto, 1938), 313-316; Mackintosh, *Prairie Settlement*, 44-57.

²⁵ Laut, "The Last Trek to the Last Frontier," 102.

south. The desire to fill the vast lands yet open, the necessity of additional traffic for overexpanded railroads, and the urgency of lessening the tax burden by the creation of additional wealth of new taxpayers impelled Canadians to look to the United States for incoming citizens.²⁴ Europe, they realized, needed its people for the reconstruction of a shattered continent.

The anticipated rush of immigrants never materialized. American farmers were too busily engaged in exploiting a brief period of prosperity to consider emigration. Moreover, available lands in Western Canada were now largely in the hands of speculators, and land prices, though lower than in the United States, were high enough to discourage most Americans from making the change. In spite of this, Canadian real-estate agents and land speculators filled newspapers with optimistic predictions of the coming land boom in which American farmers who had "more money than ever and only one way to invest it—that is, to buy more land" would pour across the boundary.²⁷ The sprinkling of Americans who moved into the Prairie Provinces was widely publicized by railway and land agents, but to no avail.²⁸ The mass movement was over, and the relatively small numbers who came did little but stir false hopes in Canada.²⁹

The motives which impelled "the last trek" were, of course, primarily economic. The rise in the cost of land and in rents in the United States, the necessity for increased production to meet the needs of urbanization, the mechanization of agriculture which reduced the premium on labor and made possible the profitable cultivation of the vast acres of Western Canada, and the decline of the fertility of older soils with resulting increases in the costs of production were the forces behind the movement. The individual farmer, it is true, was not always aware of these forces, but when Dakota land sold for \$50 an acre in 1909 while just across the border in Saskatchewan the same type of land could be purchased for \$2 an acre, it required no knowledge of higher mathematics to visualize a substantial profit in the exchange of American

for Canadian land. Even more profitable was the practice of selling Iowa land for \$65 to \$150 an acre and then either purchasing cheap land or homesteading in Alberta or Saskatchewan. As one farmer explained it, "There is no way people can pick up \$3000 easier than to come up and homestead here for three years. There will be 160 acres for nothing, and if the land is any good, at the end of the three years you can sell it for \$20 an acre."³⁰ The result was an unhealthy speculation which frequently created a speculator more interested in quick profits than in the permanent development of the country.

Linked to the profit motive was the very strong psychological desire to remain on the soil and keep the sons of the family on farms.³¹ With the inflation of land values in the United States, this became increasingly difficult. Moralists, politicians, and farm leaders deplored the rush to the cities and the resulting loss to the farm life of the Nation but offered no practical solutions. Many farmers found the answer by joining their neighbors in the migration northward and by establishing their sons on farms adjacent to their own new homes.

There were other psychological and political motives as well. Many who made the change later gave as their reason a profound dissatisfaction with agricultural conditions in the States.³² Professor Fred A. Shannon has advanced the suggestive hypothesis that the rise of the city acted as a safety valve for rural discontent,³³ and it may well be that in a similar way, though to a lesser degree, the Canadian West served the same purpose. The more favorable agrarian legislation in the Prairie Provinces was a powerful magnet which attracted many disillusioned ex-Populists. Municipal hail insurance laws, a lenient land tax system, and cooperative marketing legislation were looked upon as evidences of a more progressive legislative attitude.³⁴

²⁴ Laut, "The Last Trek to the Last Frontier," 103-104.

²⁵ Hansen and Brebner, *The Mingling of the Canadian and American Peoples*, 223; *Manitoba Free Press*, Mar. 31, 1919.

²⁶ Letter of William Nesbitt, Sr., an ex-American, in *Grain Growers' Guide*, 3(30):15-16 (Feb. 22, 1911).

²⁷ Fred A. Shannon, "A Post Mortem on the Labor-Safety-Valve Theory," *Agricultural History*, 19:31-37 (January 1945).

²⁸ *Nonpartisan Leader* (Fargo, N. Dak.), 5(17):11 (Oct. 25, 1917).

²⁹ Speech by the Hon. Thomas A. Crerar reported in *Grain Growers' Guide*, 10(4):31 (Jan. 24, 1917). See also *ibid.*, 10(44):6 (Oct. 31, 1917).

³⁰ *Manitoba Free Press*, Mar. 28, 1919.

³¹ *Ibid.*, Jan. 8, Mar. 31, 1919.

³² *Grain Growers' Guide*, 16(42):6 (Oct. 17, 1923); *Manitoba Free Press*, Feb. 1, 1919.

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A final and often forgotten stimulus for settlement in Canada was the appeal to racial and religious groups in the United States. It has been estimated that half of the immigrants from the United States during this period were of Canadian stock;³⁵ certainly the percentage was very high.³⁶ To the very large number of English-speaking Canadians must also be added the French-Canadians who returned to the land of their own people. Ties of blood, religion, and tradition were very strong among them, and many of them sought repatriation.³⁷ Though most of them returned to Eastern Canada, there were many who joined the movement to the Prairie Provinces.³⁸

The encouragement given to religious communities in Western Canada led to a considerable migration. Many of the racial and religious communities on the Canadian prairies came from the United States and not directly from Europe as popularly imagined. Hutterites from South Dakota, German Lutherans from Michigan, Kentucky, and Texas, and Dunkards and Mennonites from the Dakotas and Minnesota were but a few of the communities with European backgrounds which had settled in the United States but moved on when unfriendly neighbors or limited economic possibilities forced them to look for new homes.³⁹ There were also striking migrations of religious communities of native-born Americans. The most notable, of course, was the migration of Mormons from Utah into southern Alberta which began in 1887 and continued for a number of years.⁴⁰ Migrations of this type also included a Presbyterian group which left Dawes County, Nebraska, for Lacombe, Alberta, in 1900,⁴¹ and a large Catholic migration from Saint Paul, Minnesota, to the Hoodoo Plains near Prince Albert, Saskatchewan, two years later.⁴²

The international character of the migration from the United States is also indicated by the

large number of racial groups which moved to the Prairie Provinces after a short stay in the Republic. These included such groups as the Finnish immigrants from Minnesota who settled near Snake Lake, Alberta;⁴³ Icelandic immigrants from North Dakota, Minnesota, and Washington who joined fellow countrymen in Manitoba;⁴⁴ Norwegians and Swedes who left Minnesota and Wisconsin for northern homes;⁴⁵ Belgians from Grosse Pointe, Michigan, who moved to Forget, Saskatchewan and Leduc and Moranville, Alberta;⁴⁶ and the famous German colony from Michigan under the leadership of William Richert, an ex-mayor of Detroit, which moved to Alameda, Saskatchewan.⁴⁷ The large numbers of persons not born in North America—"galvanized Americans," as Sir Sam Hughes called them—⁴⁸ who moved through the United States into Canada illustrate the dangers involved in using statistics based on "American-born" to understand the nature of the movement. In such statistics, about a third of the people who left American for Canadian farms are lost from view only to reappear classified under the nationality of their birth.

Though the migration into the "last best West" was the result of forces which propaganda could affect but slightly, the concerted efforts of the Canadian government and railway or land companies to educate Americans in the possibilities of the Canadian West were important. The economic desirability of settlers from the United States, as well as their farming experience, easy assimilation, and resourcefulness, led responsible authorities to make special efforts to interest them in Canadian homes.⁴⁹

It was popularly believed on the prairies that farmers from the American plains were far more successful in meeting western conditions than immigrants from England or Europe.⁵⁰ This, of course, should occasion no surprise, for many of the English immigrants sent to the prairies were "completely innocent of rural life" and required

³⁵ Hansen and Brebner, *The Mingling of the Canadian and American Peoples*, 227.

³⁶ *Sessional Papers*, 1898, no. 13, pt. 2, p. 111; Canada Parliament, House of Commons, *Debates*, 1907-08, 1:1324.

³⁷ *Ibid.*, 1909, 1:830-834.

³⁸ *Sessional Papers*, 1914, no. 25, pt. 2, p. 107.

³⁹ *Ibid.*, 1901, no. 25, pt. 2, p. 167.

⁴⁰ Donald W. Buchanan, "The Mormons in Canada," *Canadian Geographical Journal*, 2:255-270 (April 1931).

⁴¹ *Sessional Papers*, 1901, no. 25, pt. 2, p. 167.

⁴² *Ibid.*, 1904, no. 25, pt. 1, p. 26.

⁴³ *Ibid.*, 1905, no. 25, pt. 2, p. 81.

⁴⁴ *Ibid.*, 69-70; 1904, no. 25, pt. 2, p. 97.

⁴⁵ *Ibid.*, 1903, no. 25, pt. 2, p. 144.

⁴⁶ *Ibid.*, 1914, no. 25, p. 106.

⁴⁷ *Ibid.*, 1900, no. 13, pt. 2, p. 180.

⁴⁸ House of Commons, *Debates*, 1907-08, 4:6443.

⁴⁹ John W. Dafoe, *Clifford Sifton in Relation to His Times* (Toronto, 1931), 339.

⁵⁰ *Farmer's Advocate* (Winnipeg, Manitoba), 42:409-410 (Mar. 20, 1907).

several years to make the adjustment to their new environment.⁶¹ Continental Europeans, unless they came from the Russian plains, were unacquainted with prairie agriculture and were difficult to assimilate into Canadian society. American immigrants, on the other hand, not only possessed the necessary technical experience but were well prepared for life in a rural society. "Most of them had been raised in the rural districts of the several states" in which Canadian agents had operated.⁶² As one Canadian farmer poet wrote with more enthusiasm than artistry:

The Yankees in the land abound,
For Uncle Sam gets all around,
And with his push and grit, and go,
Is sure to make the country grow.⁶³

Organized inducements for settlement took all the forms familiar to students of immigration. Canadian officials were faced with the task of convincing prospective settlers that the Northwest was not the land of story and poem—"Our Lady of the Snows" as Kipling had called it—but a potentially rich agricultural region capable of supporting a prosperous and happy population. This educational program was carried out through the use of advertising in more than seven thousand newspapers and farm journals,⁶⁴ pamphlets and tracts, press excursions, and the publication of glowing reports of delegates to the West.⁶⁵

Immigration officials quickly learned, however, that personal contacts were far more effective than any of these methods, and a highly effective system of agent coverage was developed. By 1905 salaried agents were located in most of the major cities of the Middle West, and 77 subagents traveled extensively throughout the Republic extolling the virtues of life in Canada.⁶⁶ Most of their activities were centered in border States, but aggressive agents early discovered that their gospel fell on responsive ears in the more remote States of Kansas, Missouri, Ohio, and Pennsylvania.⁶⁷ To encourage their efforts, head bonuses amounting to \$3 for adult males, \$2 for adult

females, and \$1 for children under eighteen were paid the successful agents.⁶⁸

To earn these bonuses, agents not only used the time-honored devices which had lured millions from Europe to North America but also added a few profitable techniques of their own. A very effective chain-letter system was adopted to secure the names of prospective settlers,⁶⁹ and the ultra-modern magic lantern slide was pressed into use to add indisputable evidence to the agent's lecture.⁷⁰ In smaller communities where street meetings were common, Canadian agents, with their samples of grain and photographs of prairie homesteads, competed with traveling medicine men and the Salvation Army for the Saturday night crowds.⁷¹ Atlases were placed in American school rooms;⁷² women's study clubs and cultural societies were urged to study Canada and were presented with free "educational" literature on the subject;⁷³ and church organizations and clergymen were sent special literature describing the moral and spiritual advantages of Canadian life.⁷⁴

The most effective propaganda, however, was of a more practical nature. The brilliant record in Saskatchewan of Seager Wheeler, five times the world's champion grower of hard spring wheat, focused attention on the fertility of the Canadian plains.⁷⁵ The exhibits of Canadian crops at expositions and fairs were unusually effective, and almost every county fair in the Middle West could boast of having an attractive Canadian booth.⁷⁶ The striking number of sweepstake and championship entries in international farm expositions, dry-farming congresses, and State fairs proved to the most skeptical that the Canadian Northwest could produce the finest of crops.⁷⁷ Letters "home" describing crop prospects and actual farming conditions also induced neighbors and

⁶¹ *Ibid.*, 1898, no. 13, pt. 4, p. 69.

⁶² *Ibid.*, 1909, no. 25, pt. 2, p. 87.

⁶³ *Ibid.*, 1899, no. 13, pt. 2, p. 106.

⁶⁴ *Ibid.*, 1900, no. 13, pt. 2, p. 195.

⁶⁵ *Ibid.*, 1905, no. 25, pt. 2, p. 31.

⁶⁶ *Ibid.*, 1908, no. 25, pt. 2, p. 83.

⁶⁷ *Ibid.*, 1905, no. 25, pt. 2, p. 32.

⁶⁸ *Grain Growers' Guide*, 11(44):5 (Oct. 30, 1918).

⁶⁹ *Sessional Papers*, 1905, no. 25, pt. 2, p. 31; 1914, no. 25, pt. 2, p. 107.

⁷⁰ *Manitoba Free Press*, July 31, 1919; *Grain Growers' Guide*, 6(45):15 (Nov. 5, 1913), 8:1427 (Oct. 13, 1915).

⁷¹ *Grain Growers' Guide*, 9(7):6 (Feb. 16, 1916).

⁷² *Sessional Papers*, 1913, no. 25, pt. 2, p. 91.

⁷³ *Grain Growers' Guide*, 4(8):28 (Sept. 20, 1911).

⁷⁴ *Sessional Papers*, 1909, no. 25, pt. 2, p. 88.

⁷⁵ *Ibid.*, 1899, no. 13, pt. 2, p. 106-107.

⁷⁶ *Ibid.*, 1906, no. 25, pt. 2, p. 49.

⁷⁷ *Ibid.*, 1898, no. 13, pt. 4, p. 82.

friends to consider a similar venture into the Northland.⁶⁸

Canadian agents frequently took advantage of population movements within the Republic to hasten the movement to Canada. When lands were opened for settlement in Oklahoma Territory in 1902, for example, more farmers swarmed for the settlement than could be accommodated. Special agents were rushed to El Reno to describe the virtues of Canadian homesteads, and nearly a hundred families were convinced in a short time that Canada was the place for them.⁶⁹ Many farmers who had planned an Oklahoma sod-house homestead found themselves a few months later with a sod house in Alberta instead.

To the activities of the government were added those of railway and land companies whose profits depended upon the success of the efforts to fill the Canadian West. The Canadian Pacific Railway plan by which a farmer could make a 10-percent down payment on a "ready-made" farm and have 20 years to pay the balance was very attractive to many hard-pressed North Dakota farmers, and the Grand Trunk Pacific and Canadian Northern railroads developed similar programs.⁷⁰ Propaganda efforts of the Saskatchewan Valley Land Company, the Canadian Land Owners Association, and the Canadian Colonization Association did much to bring to realization Canadian dreams of Western Empire.⁷¹

Organized efforts to secure Americans for the Canadian West met with opposition both in Canada and the United States. Since the United States, unlike European nations, had no need to retain its manpower for military purposes, there was no official opposition to Canadian immigration propaganda. However, American railway and land companies opposed the movement northward as a threat to their profits.⁷²

⁶⁸ *Sessional Papers*, 1899, no. 13, pt. 2, p. 277; Archibald S. Hurd, "The Foreign Invasion of Canada," *Fortnightly Review* (London), 78:1060 (December 1902).

⁶⁹ *Sessional Papers*, 1902, no. 25, pt. 2, p. 146; 1903, no. 25, pt. 2, p. 128.

⁷⁰ *Nonpartisan Leader*, 5(17):11 (Oct 25, 1917); *Manitoba Free Press*, July 9, 1919; *Grain Growers' Guide*, 16(25):11 (June 20, 1923)

⁷¹ Fowke, *Canadian Agricultural Policy*, 180-181; Dafoe, *Clifford Sifton*, 308; *Manitoba Free Press*, Apr. 3, 1919; *Grain Growers' Guide*, 16(34):14 (Aug. 22, 1923).

⁷² *Sessional Papers*, 1905, no. 25, pt. 2, p. 32.

Canadian agents in the United States felt that numerous measures were aimed at their work by American companies competing for settlers. The creation of a central publicity bureau in Saint Louis by American land companies, the expenditure of \$300,000 in newspaper advertising by one American railway company to publicize its lands, the formation of the American immigration and Minnesota immigration associations of Saint Paul, and the refusal of many bankers throughout the Middle West to lend money to any who intended investment in Western Canadian land were cited as measures calculated to undermine the effectiveness of their work.⁷³ Counter propaganda usually pictured the Canadian plains as a land of ice and snow, drought, and disillusionment. The occasional outbursts of Canadian politicians against the loyalty of ex-Americans were seized upon as evidence that Americans were not wanted,⁷⁴ and after 1914 wild stories of the hanging and shooting of aliens in Canada were circulated.⁷⁵

Far more effective in diverting settlers from Canadian to American farms was the effect of the opening to settlement of Indian and military reservations in Minnesota, North Dakota, Montana, and Oklahoma.⁷⁶ The Kinkaid Homestead Act of 1904 and the Enlarged Homestead Act of 1909 opened dry lands on more liberal terms than previously, and Canadian agents considered them especially damaging to their work.⁷⁷ Other areas which attracted many who might otherwise have gone into Canada included the Florida Everglades, the Texas plains, New Mexican irrigated tracts, the Arizona plateau, and the United States reclamation tracts.⁷⁸

Opposition also came from many other directions. States especially affected by the migration took measures to halt the movement. Wisconsin barred the Canadian exhibit from its State fair in 1912 on the basis that Canadian immigration literature was "false and misleading,"⁷⁹ and in the following year the Minnesota legislature appropriated \$100,000 for immigration work. An immigration office was opened in Saint Paul

⁷³ *Ibid.*, 1905, no. 25, p. 32-35.

⁷⁴ *Grain Growers' Guide*, 6(11):26 (Mar. 12, 1913).

⁷⁵ *Sessional Papers*, 1917, no. 25, pt. 2, p. 74; *The Sun* (Swift Current, Saskatchewan), Jan. 28, 1916.

⁷⁶ *Sessional Papers*, 1901, no. 25, pt. 2, p. 168.

⁷⁷ *Ibid.*, 1905, no. 25, pt. 2, p. 34.

⁷⁸ *Ibid.*, 1913, no. 25, pt. 2, p. 92.

⁷⁹ *Grain Growers' Guide*, 4(44):4 (May 29, 1912).

directly opposite the Canadian office, and attractive displays advertised lands still available within the State to prospective settlers.⁸⁰ American farm journals frequently printed adverse reports and discouraged farmers from making the change.⁸¹ In some localities the Grange openly opposed Canadian immigration agents, and professors in agricultural colleges were charged with using their influence to obstruct the work.⁸² In general, however, such opposition had little influence one way or the other.

Canadian methods of securing immigrants were also opposed by many in Canada. The use of head bonuses came under severe criticism, as did the type of literature circulated by immigration agents.⁸³ The *Toronto Globe* warned that "Canada cannot afford to lose her good name by rewarding her agents for practising deception,"⁸⁴ and the *Grain Growers' Guide* pointed out that "Something for nothing" is a mighty poor slogan upon which to develop a permanent civilization."⁸⁵ Canadian agricultural societies added their objections to literature which made conditions "appear better than they really are, believing that every immigrant should know the true facts as to conditions in this country before being induced to come here."⁸⁶ Frequent criticisms were leveled at the government policy of encouraging racial settlements on the prairies. A resolution of the Winnipeg Board of Trade in 1911 is of particular interest for it condemned the movement of large numbers of Negroes from Oklahoma on the ground that they did not prove to be "satisfactory as farmers, thrifty as settlers, or desirable neighbors."⁸⁷

As a frontier society, the "last best West" compared in most respects to similar regions in the American West. In the Park Belt, life assumed

much the same pattern as in Manitoba, Minnesota, or Wisconsin. Log cabins usually served as the first homes, and mixed farming was practiced to an increasing extent. In the dry belt, however, the shortage of timber and water compelled the adoption of the dry-farming methods of the American plains. The sod house and miner's tent were familiar sights during the early years of settlement, and the problem of fuel was solved in traditional plains fashion.

In both regions farmers from the United States were usually successful. Their success was revealed in countless ways. Statistically, for example, immigrants from the United States had the lowest percentage of deportees of all nationalities moving into Canada during these years. Immigration officials explained that this was true because the Americans were "mostly agriculturists in the Northwest" who possessed adequate financial resources to prevent their becoming public charges.⁸⁸

The ease with which the American settlers adapted themselves to Canadian conditions may be explained by the very nature of the migration. They possessed the necessary experience to farm successfully on the plains or in the Park Belt. This was of particular importance in the areas which required the application of dry-farming techniques. Experience gained on the American plains was extremely valuable as an example "to those from other countries who had not had the opportunity of a training in Western life."⁸⁹ Experience on the American plains had also produced such indispensable tools for western conquest as the chilled-steel plow, the "dug out" for water storage, the flat furrow, and the steam plow.⁹⁰ Crops such as Grimm and Turkestan alfalfa and Turkey Red winter wheat were also brought in to add to the agricultural wealth of the Canadian West.

With his experience, the American farmer almost always brought sufficient farm equipment and adequate capital. Thus, the average immigrant from the States not only brought himself into the country without aid or subsidy but became an immediate producer of wealth. The result was

⁸⁰ *Sessional Papers*, 1914, no. 25, pt. 2, p. 112.

⁸¹ *The Farmer's Advocate* (Winnipeg) reprinted many of these comments. For examples, see 46:1209 (Aug. 17, 1910).

⁸² *Sessional Papers*, 1915, no. 25, pt. 2, p. 127.

⁸³ House of Commons, *Debates*, 1907-08, 1:1295, 2:3310-3313; *Western Independent* (Calgary, Alberta), 1:3 (Oct. 22, 1919).

⁸⁴ Quoted in House of Commons, *Debates*, 1907-08, 2:3312-3313.

⁸⁵ *Grain Growers' Guide*, 7:842 (July 8, 1914).

⁸⁶ *Ibid.*, 16(17): 15 (Apr. 25, 1923); *The UFA* (Calgary, Alberta), 4:5 (Feb. 25, 1925).

⁸⁷ *Grain Growers' Guide*, 3(39):19 (Apr. 26, 1911).

⁸⁸ *Sessional Papers*, 1908, no. 25, pt. 2, p. 135.

⁸⁹ *Ibid.*, 1902, no. 25, pt. 2, p. 143.

⁹⁰ *Ibid.*, 1910, no. 25, pt. 2, p. 81; Mackintosh, *Prairie Settlement*, xi.

the highest percentage of farm owners of any class of immigrants coming into Canada.⁹¹

Though costs for getting raw land into production varied greatly throughout the Canadian West, \$5 to \$15 an acre were usually required to get a crop from new land. Regular land breakers would plow, disk, and seed the new land with steam power for an average of \$8 an acre, and the farmer who had his own equipment could do it for considerably less. A sod house or miner's tent, banked with snow during the winter season, served as a shelter for the first year or two on the plains, and in wooded regions a temporary shack could be thrown up for little or no outlay of cash. If the settler lacked the necessary equipment when he arrived, he could purchase a wagon, harrow, plow, and harness for an estimated \$500, and seed grain would require another \$200 for the average 160-acre farm.⁹² For those who lacked sufficient cash to get their land under crop, rapidly expanding railroads offered employment, and many settlers took advantage of this to supplement the low incomes of initial years.

The early settler in the Canadian West met the same problems which had faced pioneer farmers across the boundary. Hail, frost, rust, grasshoppers, and drought blighted the hopes of many an optimistic settler and left him wondering why he had come north. More than one farmer's wife found that exchanging "airy nothings" with the implement agent when solid specie was in demand and cooking for male relatives who had "bachelor's degrees in the art" were almost as trying as the vagaries of an unfriendly nature.

The inevitable ebb tide of settlement, a phenomenon so familiar in frontier history, was in full evidence by 1913. The flow of immigration into the Prairie Provinces dwindled and reversed itself for the same reasons which explain similar movements in other pioneer areas. Many returned to the United States with profits made by land speculation or by mining the soil. It was popularly believed in Canada that this was the explanation for the exodus of American farmers. Stories of successful farmers who moved to Cal-

ifornia or returned to their former homes were magnified and quickly became part of the frontier tradition. That there were many who moved in "to skim the cream off a new country" and then took vacations in California or left the prairies permanently is certainly true, but that they were more than a small minority is questionable.⁹³

The return movement from Canada to the United States, which swelled in volume until the balance again favored the Republic, had more basic causes than the return of those who had prospered. A succession of bad years in certain areas caused many to despair of success in the struggle against an inhospitable nature. The high cost of agricultural implements discouraged others who felt that they were paying up to 20 percent more for their equipment than they had in the States and, at the same time, were receiving 10 to 20 percent less for everything they sold.⁹⁴ Even before the disastrous deflation of 1913, many were discouraged and looked elsewhere for success. The alluring stories of immigration literature and the glowing prophecies made by immigration agents were not always realized.

To many a bitter prairie settler, the cause for his failure was not mismanagement, poor farming methods, or even an unfriendly nature but the protectionist activities of Eastern manufacturers and financiers who would make serfs of Canadian farmers. Fundamentally, of course, the American settler was caught in an extremely vulnerable economy. He had moved from a national economy to an international economy which relied upon imported capital for its development and upon a world market for the sale of its only commodity. The decline of wheat prices on the Liverpool market and the failure of the London money market to pour further investments into the Canadian West brought a sharp deflation in 1913 which was keenly felt by the single-crop economy. Many Americans who had come to a "pigless paradise" found that poor crops, high production costs, and lower selling prices quickly dissipated initial reserves.⁹⁵ The inevitable result was a further migration northward to regions of

⁹¹ Dafoc, *Clifford Sifton*, 322; John Proskie, *Financial Progress of Settlers with Special Reference to the Vulcan-Lamond Area*, 220, unpublished M.A. thesis, University of Alberta.

⁹² John Wilson, "Experiences of a Homesteader," *Grain Growers' Guide*, 4(19):44-45 (Dec. 6, 1911); Laut, "The Last Trek to the Last Frontier," 105.

⁹³ *Grain Growers' Guide*, 6(1):3 (Jan. 1, 1913), 8:1753 (Dec. 29, 1915).

⁹⁴ J. H. Haslam, "Why Settlers Leave," *ibid.*, 9(35):8, 19, 20 (Aug. 30, 1916).

⁹⁵ *Grain Growers' Guide*, Apr. 19, 1911, July 17, 1912, Jan. 7, 1914, Dec. 29, 1915, Aug. 30, 1916, Apr. 25, 1923.

more rainfall, an escape to the cities, or a return to the United States.

The movement of such great numbers of American farmers into Western Canada was accompanied by profound social and political consequences. Grave fears were expressed on both sides of the boundary that the migration was not an unmixed blessing. To the south there was the fear that the Republic was losing many of its best farmers and much of its agricultural wealth. The *Nonpartisan Leader* deplored the loss of North Dakota's finest farmers,⁹⁶ and Champ Clark criticized the migration as "the depleting of the Western Middle States."⁹⁷ To the north also there were grave fears that the flood of Americans would alter the character of Canadian society and leave it more American than British.

As early as 1903 Goldwin Smith observed that even as he wrote "settlers from the United States are pouring into the North-Western Territories, which they were sure to do when in Minnesota and Dakota land became dear. The North-West will be American."⁹⁸ This unrealized prophecy became the *bête noire* of British-Canadians who filled newspapers and periodicals with dire predictions of the future of the Prairie Provinces. "The great majority of those American settlers are good citizens, but they have great powers of assimilation, and are, first, last and always, Americans" was the opinion of one Westerner in 1909.⁹⁹ Another contemporary observer asked: "Must we sit by and watch one of the most promising daughter-lands of the Mother-country being peopled by settlers of alien blood, witness the development of a policy which if not anti-British is seemingly not pro-British, and risk the political complications which may occur, in spite of all the sanguine hopes of the Dominion immigration officials?"¹⁰⁰

The necessity of settling the West and the desirability of American farmers from a purely economic point of view remained unchallenged, but the admission of people unacquainted with British institutions gave rise to some alarm.¹⁰¹ Lack of

British interest in the development of the Canadian West was bitterly deplored by many Canadians, one of whom felt that such disinterest was "driving us into the arms of the United States, for we must get people and we must have money for our rising industries."¹⁰²

Fears on both sides of the boundary were exaggerated and were gradually forgotten as the years passed. There were brief revivals of these apprehensions during the First World War, but they vanished with the passing of the war spirit. Following the war there were expressions of anxiety that a renewed flood of American settlers and speculators would take the land needed to carry out soldier rehabilitation programs. This fear was never realized and was quickly buried under an avalanche of arguments demanding further colonization to reduce war debts and solve the financial problems of the railways and the provincial governments.¹⁰³

In general, the ex-Americans fitted into life in the Dominion without doing violence either to the society into which they moved or to the social and political ideas they brought with them. The adjustment to British institutions was made quietly and easily by the great majority, though not without certain misunderstandings and hesitations on the part of a few.

Differences in law enforcement in their new homes impressed many Americans.¹⁰⁴ As one farmer testified, "We have as good laws in the United States as you have in Canada, but they are not administered in the same way. I observe all laws on your Statute Books are strictly put into force, as occasion requires, while in our country many laws are a dead letter."¹⁰⁵ Testimony such as this repeated in letters to neighbors back home helped to create a favorable impression of this last frontier and induced many to consider settlement in the new land.

American farmers carried with them an agrarian political experience which had a profound effect upon the political life of the Prairie Provinces. Reared in the atmosphere of Populism and agrarian discontent, they were well aware of the potential political power of the farmer. This experience, combined with a lack of loyalty toward traditional

⁹⁶ *Nonpartisan Leader*, 5(17):11 (Oct. 25, 1917).

⁹⁷ "Why Our Farmers Seek Canada," *Literary Digest*, 45:1217-1219 (Dec. 28, 1912).

⁹⁸ Goldwin Smith, *Reminiscences* (New York, 1910), 417.

⁹⁹ John H. O'Donnell, *Manitoba As I Saw It from 1869 to Date* (Toronto, 1909), 155.

¹⁰⁰ Hurd, "The Foreign Invasion of Canada," 1065.

¹⁰¹ House of Commons, *Debates*, 1909, 1:853.

¹⁰² Hurd, "The Foreign Invasion of Canada," 1055.

¹⁰³ *Manitoba Free Press*, Mar. 31, 1919.

¹⁰⁴ John Foster Fraser, *Canada As It Is* (London, 1911), 115.

¹⁰⁵ O'Donnell, *Manitoba As I Saw It*, 121-122.

parties; gave the ex-Americans a political viewpoint different from anything yet experienced in Canada. "The International Boundary is an invisible and intangible thing. Trade may be controlled, but ideas cannot be excluded," wrote the rancher-editor, C. W. Peterson. "Owing to the geographical situation it is almost inevitable that schemes of social reform in the two countries will go hand in hand."¹⁰

It is not surprising, therefore, to find that the ferment for agrarian reform is continental in scope, and that the movement of Americans into Ca-

¹⁰ C. W. Peterson, *Wake Up Canada: Reflections of Vital National Issues* (Toronto, 1919), 22.

nada led to the organization of Canadian branches of the American Society of Equity, the Non-partisan League, and the Ku Klux Klan and gave strong support to the demands for prohibition, direct legislation, the single tax, the recall of public officials, direct primaries, woman suffrage, free trade, and proportional representation. This agitation and ferment set the stage for the most impressive of the third-party movements in Canada—the Progressive movement which found its chief strength among the farmers of the Prairie Provinces and was another of the agrarian revolts so familiar to the student of North American agriculture.

PEHR KALM'S OBSERVATIONS ON THE FENCES OF NORTH AMERICA

ESTHER LOUISE LARSEN

The importance of fences in the development of agriculture has been the subject of a number of recent studies.¹ As the data on fences in the colonial period are scant, the notes on the subject by trained observers are especially valuable. With a view to making available the observations of Pehr Kalm on the kinds of fences he saw in mid-eighteenth-century America, Mrs. Esther Larsen Doak here presents a translation of the pertinent statements in his famous journal which appeared originally in three volumes with the title, *En Resa til Norra Amerika* (Stockholm, 1753-1761).²

¹ See Clarence H. Danhof, "The Fencing Problem in the Eighteen-Fifties," *Agricultural History*, 18:168-186 (1944); Earl W. Hayter, "Barbed Wire Fencing—A Prairie Invention: Its Rise and Influence in the Western States," *ibid.*, 13:189-207 (1939), "The Fencing of Western Railways," *ibid.*, 19:163-167 (1945), and "An Iowa Farmers' Protective Association: A Barbed Wire Patent Protest Movement," *Iowa Journal of History and Politics*, 37:331-362 (1939).

² The segments here presented are in Pehr Kalm, *En Resa til Norra Amerika*, 2:223-224, 269-270, 334-335, 3:15-18, 171, 201-202, 246, 303, 312-313, 374-375, 396, 496 (Stockholm, 1756-61). The translation is from *Pehr Kalms Resa till Norra Amerika*, å nyo utgifven af Fredr. Elfvig och Georg Schauman, 2:155-156, 186, 230, 3:14-17, 134, 158, 192, 235, 241-242, 288-289, 304-305, 380 (Helsingfors, 1910-15). Except for the entries for August 3 and 17, 1749, a corresponding version, either complete or abridged, is available in *The America of 1750; Peter Kalm's Travels in North America; The English Version of 1770*, revised from the original Swedish and edited by Adolph B. Benson, 1:50, 77, 115, 238-239, 334, 352, 380, 2:416, 421, 459, 530 (New York, 1937).

Unlike previous English translations, Mrs. Doak's translation is complete and is made directly from the original Swedish.—Everett E. Edwards.

Kalm's Notes

Germantown, September 22, 1748. Everywhere in this locality fences surrounding fields and meadows are made from wood. Hedges, usually of *Ligustrum*,³ are established in a few places. The fences are not of the same structure as ours. Posts 2 to 3 *aln* in height have four to five holes bored through them at intervals of about a half an *aln*.⁴ One of these posts serves the same purpose as two or even two pairs of posts in Sweden. The posts are set in a row at intervals of 2 to 3 *famn*.⁵ Later, boards 1½ to 2 *quarter* wide are stuck through the holes in the posts.⁶ At a distance such a fence resembles our Swedish corrals or animal traps. They are no tighter than these since they are only used for keeping out large livestock such as cows, horses, and sheep. In the immediate vicinity of Philadelphia swine are usually kept in the farmyard, and therefore they never have occasion to get through these gaping fences. The wood preferred for fences is that of the chestnut since it withstands rot longest. Such a fence may last over thirty years. When chestnut is not available white or black oak is

³ *Ligustrum* is privet.

⁴ An *aln* is 24 to 36 inches.

⁵ A *famn* equals the compass of the arms or about 6 feet.

⁶ A *quart* equals ¼ *aln* or about 6 inches.

used. Red cedar, the most rot resistant of all wood, does not grow in any quantity in the vicinity of Philadelphia. Although this wood must be purchased many fences in the neighborhood are built from it.

Philadelphia, October 1, 1748. I have already said something about fences on page 223. Now I must add that nearly or I might say all fencing used in the vicinity of Philadelphia is red cedar, which is said to be a most durable wood. If it is not available white or black oak is used. According to Mr. [John] Bartram red cedar makes the best fence posts. The next best is white oak and then chestnut. The type of wood found here does not last long in the ground. A great deal of

Racoon, New Jersey, January 22, 1749. The worm fence of the Englishman, so called because it is made up of a series of crooks, is commonly used in Pennsylvania, New Jersey, and New York. In this type of fence, posts are not used; there are just rails. All of these are equal in length, that is about 2 *famnar*. The rails are placed with the ends on top of each other as in a log building; they are not notched but just piled loosely, as, for example, in figure 1.

If rails A B, C D, E F, and G H are placed next to the ground, B C, D E, and F G are placed on top of them followed by A B, C D, etc., until the fence reaches the proper height. The height varies from 2 *alnar* to 10 *quarter* and occasionally

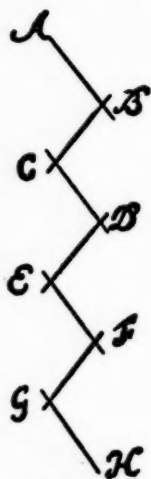


Figure 1



Figure 2

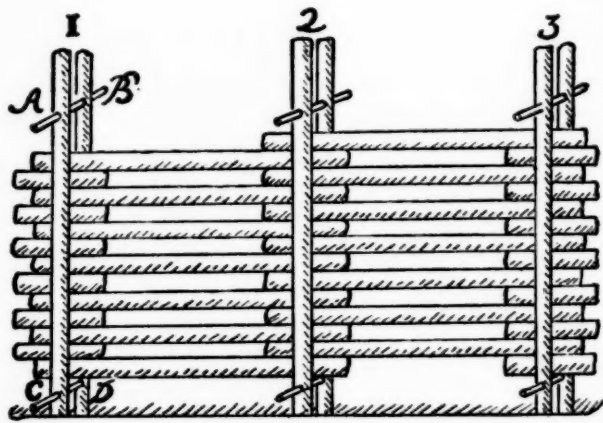


Figure 3

the wood in contact with the soil had rotted from chestnut posts set the previous year.

Philadelphia, October 27, 1748. The fences were so low in many places that animals could easily jump over them. Nearly all swine wore triangular wooden yokes which prevented them from jumping fences. Later I noticed that these yokes were used throughout the English colonies. The horse halters had a piece of wood suspended from them. This piece of wood was hooked or pegged in such a manner that it would catch on the fence if the horse attempted to jump over it. I do not know if this method is always effective. In some localities a stick is bound to the horse's right front foot and the other end to the hind foot on the same side. The horses thus fettered walk slowly. A horse could conceivably jump some fences under these circumstances, but it seems doubtful that he would try.

reaches a height of 3 *alnar*. Sometimes a fence becomes so high that it must be braced at the angles B, C, D, etc. Two rails, crossing each other at the top and set in the ground at the base, are placed at each angle of the fence for bracing.

Various types of wood are used for these fences, but not all types are equally durable. Red cedar (*Juniperus virginiana*) is considered the most durable since it lasts thirty years or more. As it is exceedingly rare in this locality, fences are not built from it. The best fences in the vicinity of Philadelphia are made from red cedar which is shipped from Egg Harbor where it grows in great quantity. The cedar fences in the vicinity of Philadelphia are of an entirely different type than the worm fence just described. They resemble our corrals (see my *Bohuslänska Resa*, page 284). The posts set in the ground are white cedar (Cy-

pressus thyoides),⁷ and the rails between them are red cedar. The ends of each rail are stuck into holes in the posts. Next to cedar, white oak and chestnut are considered most durable. The wood of the chestnut is considered best, but it is not plentiful enough to be used for fencing. Small trees are not used for fencing material as in Sweden, but large trees are cut. The trunk is divided into proper lengths, and each length split into rails of the desired size. Thus a great deal of fencing material is obtained from one tree.

Some of the older inhabitants informed me that the first Swedes who came to this country erected fences from posts and rails such as those in common use throughout Sweden. Experience showed, then as now, that posts set in the ground rarely lasted more than four to six years. In that length of time the part of the post in contact with the soil rotted. Lack of durable withes was one of the chief difficulties. Hickory, one of the toughest woods to be had, was undoubtedly used for withes. White oak may also have been used. In a few years the withes rotted and fences fell apart; therefore, this method of fence building was discontinued. Swedes, who arrived in recent years, have attempted setting up fences with posts and withes, but they have been equally unsuccessful. It is evidently impossible to make the Swedish type of fence here.

Worm fences are the most practical, since posts obtained from wood grown here withstand rot only 4, 6, or, at the most, 8 years before they must be replaced. The fencing is exceedingly heavy, and posts or poles are under a great stress; thus they are readily upset by the heavy storms so common to this country. Experience has shown that fences of white oak and chestnut rarely last more than ten to twelve years. By that time the wood is so rotten it can only be used as fuel. A fence built from any other wood rarely lasts more than six or eight years. If one considers that worm fences are crooked and require a greater quantity of material than if they were straight, that they must be replaced in a relatively short time, and if one also considers the unbelievable quantity of wood burned night and day in every room in the house throughout the winter, one sees what punishment the forest is taking and wonders how it will look in thirty or fifty years.

Albany, June 15, 1749. Fences around fields, meadows, and pastures are generally made from

deals laid on top of each other between poles or posts of pine. This material is plentiful because of the dense forests and many sawmills.

Between Albany and Saratoga, June 22, 1749.

Log fences are a peculiar type of fence which we have not previously described. They are used everywhere along the Hudson River where there is an abundance of forest. The fence is built of long thick logs. All the logs in a section are the same length. The fence is usually 2 *alnar* to 10 *quarter* in height. Posts are not used, and the logs are joined at the ends as illustrated in figure 2. If, for example, the fence is to be three sections in length, namely A B, B C, and C D, a short log is placed at A, B, and C. In order to make the fence solid A B, B C, and C D are fitted into notches in the cross logs. On top of these logs at A, B, and C other notched cross logs are placed, and long logs are placed on top of them. Logs are piled in this manner until the desired height is reached. Sometimes logs are stacked as at D and E. The building of this type of fence is possible so long as there is an abundance of forest. Many fences of the same size and value could be made from the timber used in one log fence provided the timber were split or better yet sawed into lumber.

Fort Frederick (Crown Point), July 6, 1749.

Fences are exactly like those most common in Sweden, but the distance between the posts is greater, usually 2, 2½ or 3 *famnar*. The withes are of hickory, looped and knotted.

Between Montreal and Trois-Rivières, August 2, 1749. The fences are like our common fences.

Trois-Rivières, August 3, 1749. Fences around fields and meadows in this vicinity are constructed as illustrated in figure 3. Rails are made from small tree trunks cut in equal lengths, usually about 3 *famnar*. Withes are not used; instead two posts are driven into the ground opposite each other. A short distance above the ground, a hole is bored through the posts, and a heavy wooden pin 1½ *quarter* long is driven through the posts binding them together. The posts are just far enough apart to permit rails to be shoved between them. See C D in the figure. The posts are bound together above the rails as indicated by A B. One rail is laid between post pairs 1 and 2 and another between 2 and 3 with ends overlapping. A third rail is laid between 1 and 2 and so forth, until the fence reaches the desired height. These fences are common throughout Canada. It is easy to make a joint or opening

⁷ *Chamaecyparis thyoides* (L.) BSP.

in this type of fence, and it has the advantage of using few posts. The posts are made of *Thuja occidentalis*,⁸ a tree which withstands rot longer than all others found here. The rails are usually made from spruce which is said to be more durable than the pine of this country.

Between Québec and Lorette, August 12, 1749. Today fences were entirely too numerous. Although cultivation was not extensive, fields, meadows, and yards were all enclosed. Such extensive fencing brings about the destruction of the forest and is possible only as long as the country is new and an almost inexhaustible supply of timber is available. Since economical husbandry of this precious gift is unheard of, it will undoubtedly be difficult to have one's grounds well fenced in the future. The forests, particularly those near cities, are so cut over that when the fences now standing rot it will be necessary to plant hedges. This situation is undreamed of at present. It is fortunate that the cockspur hawthorn (*Crataegus coccinea*),⁹ which grows everywhere even on the poorest driest hills, offers itself for this purpose. The fences are nearly all of the same type. They are made of *Thuja occidentalis* which is split into rails of the desired size and then cut into lengths

of 6 to 8 *quarter*. These rails are driven into the ground perpendicularly one against the other. They are fastened together at the upper end by horizontal rails placed either on one or both sides of the perpendicular rails. The horizontal rails are usually bound with withes of ash or some other wood. The fence is not braced by side posts. This was the only type of fence observed in any quantity on this date and for several days following. An occasional fence was observed which was constructed almost exactly like our corrals (see the figure in my *Bohuslänska Resa*, page 284). *Thuja*, mentioned above, is supposed to be the most durable of all wood in this locality. No other wood is as rot resistant in the ground as this one. It is said to last a lifetime in some localities.

Québec, August 17, 1749. Fences around fields near the city are of the type in which posts are driven into the ground at intervals of 3 *famnar*. About three rails are shoved through holes in the posts one above the other. Cockspur hawthorn branches are woven through the rails in order to prevent animals from getting into the fields.

Sault au Récollet, September 25, 1749. In some places stone fences are used between fields instead of wooden fences. The quantities of stone available make construction of these fences easy. They are built in the usual fashion broad below and narrow above. There were various types of wooden fences. Some are like those described above for Philadelphia. There were also some made from perpendicular *famn*-length posts of *Thuja* like those described for Québec.

⁸ The common arborvitae.

⁹ *Crataegus crus-galli* L. is the species commonly referred to as cockspur hawthorn. It is considered the best of American hawthorns to plant in hedges. See Esther Louise Larsen, "Pehr Kalm's Observations Concerning the American So-Called Cockspur Hawthorn's Usefulness for Quickset Hedges," *Agricultural History*, 19:254-255 (October 1945).

THE SPREAD OF IMPROVED CATTLE THROUGH THE EASTERN UNITED STATES TO 1850

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By the early nineteenth century, agricultural leaders, editors of agricultural journals, and many farmers and livestock breeders had become acutely conscious of the need of improving the size and feeding qualities of the common stock of cattle in the United States.¹ Coupled with this consciousness was a desire to bring about more diversified agriculture, especially in the Atlantic seaboard area where the land had been exhausted by specialization in tobacco and grain. Extensive use of clover and plaster of paris in parts of eastern Pennsylvania, New York, New England, and a few localities in Maryland and Virginia made possible increased attention to the feeding of cattle. A method of culture which utilized plaster, clover, and manure from the feeding of livestock was widely advocated by the agricultural writers of the time as the only possible means of restoring the exhausted soils to their original fertility and keeping them productive.² In order for livestock to be profitable, these men contended that farmers must improve the quality of their animals. Cattle and other stock that would take on weight rapidly, in proportion to the amount of food consumed, must be acquired as soon as possible. These early reformers also realized a need for better milking qualities in cattle. Especially was this true in New England.

The story of the importations of Bakewell Longhorns and what were probably early examples of Shorthorns in 1783 by Matthew Patton of the south branch of the Potomac and H. D. Gough

of Maryland has already been told elsewhere.³ These cattle, with the importations of a Mr. Miller of Augusta County, Virginia, formed the foundation of the famous Patton stock which was said to have increased the weight of 4-year-old bullocks in Kentucky 25 to 30 percent between the time it was introduced there by Matthew Patton, Jr., in 1785 and the introduction of Shorthorns by Lewis Sanders and his associates in 1817.⁴ There were probably other importations into Maryland about the same time, for John S. Skinner, editor of the *American Farmer*, remarked in 1821 that hardly a drove of fat stock brought to the Baltimore market failed to show traces of the stock imported from time to time by Robert Patterson, the late Messrs. O'Donnel, Gough, Sprigg, and a few others. In addition he reported that there was a commendable exhibition of good cattle and sheep at a cattle show in Baltimore on June 7, 1820, and that most of the blooded cattle was of the Bakewell breed.⁵

Less familiar importations before the beginning of the nineteenth century were those into Connecticut and Maine. A correspondent of the *Cultivator*, in 1845, reported that several enterprising citizens had imported cattle into Connecticut at an early date. Among the earliest were the late Governor Wolcott of Litchfield and Samuel and Elizur Wolcott and Colonel Jeremiah Wadsworth of East Windsor. They had, between 1790 and 1800, introduced various improved cows and

³ Charles T. Leavitt, "Attempts to Improve Cattle Breeds in the United States, 1790-1860," *Agricultural History*, 7:58 (April 1933); James Westfall Thompson, *A History of Livestock Raising in the United States, 1607-1860* (U. S. Dept. of Agriculture, *Agricultural History Series No. 5*, Washington, 1942), 129; Lewis Cecil Gray, *History of Agriculture in the Southern United States to 1860* (Washington, 1933), 2:848-850.

⁴ *Cultivator*, n.s., 7:76-79 (March 1849).

⁵ *American Farmer*, 2:113 (July 7, 1820), 3:112 (June 29, 1821).

¹ The research incident to this article is part of a larger investigation which was made possible by a Social Science Research Council fellowship.

² *American Farmer*, 1:57-58, 65-66, 73-74, 81-82, 94-95, 132-133 (May 21, 28, June 4, 11, 18, July 23, 1819), 2:79, 113 (June 2, July 7, 1820). See also the early issues of the *Genesee Farmer* (Rochester, N. Y.), the *Cultivator* (Albany, N. Y.), and the *New England Farmer* (Boston).

bulls into their neighborhoods, but it was impossible to tell what breed they were. Some stockmen thought they were Shorthorns.⁶

Charles Vaughan of Kennebec, Maine, imported two bulls, two cows, and a bull calf, from England in 1792. The bull calf was presented by Vaughan to Christopher Gore of Massachusetts and became the foundation of what was afterwards widely known as the Gore breed. The other stock was bred without admixture by Charles and Benjamin Vaughan until 1824, when a cross was made with the widely publicized Shorthorn bull Denton. For over thirty years, bulls from these herds were taken annually to different parts of the New England States.⁷

The Maine and Connecticut stock probably belonged to the Longhorn or Bakewell breed, which was also introduced into Massachusetts by Gilbert Stewart and Ward N. Boylston, and into New York by a Mr. Adcock of Otsego County. By 1849, however, when these introductions were reported in the agricultural press, there were probably few, if any, of the pure breed in the whole country.⁸ They had been crossed, as was most of the imported cattle in the Eastern States, with the common stock or with the more popular Shorthorns introduced later.

There were other scattered importations of English cattle into Maryland and eastern Pennsylvania before the emphasis shifted to Shorthorns. The gift of six 2-year-old Devon heifers and a bull from Thomas Coke of Holkham and Norfolk, England, to Robert Patterson of Baltimore in 1817 soon produced a progeny which scattered widely over Maryland and adjacent States.⁹ During the next few years, offspring bulls were sent to Connecticut and New York, and one was placed on John S. Skinner's farm near Baltimore for public use. One bull was purchased by Samuel Hurlbut of Winchester, Connecticut, in 1819, and within six years was reported to have sired nine hundred calves. Hurlbut and his brother Lemuel had by that time become the most extensive breeders of Devons in the United States and were sending their stock to Massachusetts, Vermont, Ohio, South Carolina, and New York.¹⁰

⁶ *Cultivator*, n.s., 2:321 (October 1845).

⁷ *Ibid.*, n.s., 6:375 (December 1849).

⁸ *Ibid.*, n.s., 6:248-249 (August 1849). In this volume Luther Tucker, the editor, included a series of articles on the history of improved cattle.

⁹ Leavitt, "Attempts to Improve Cattle Breeds," 63; *American Farmer*, 3:112 (June 29, 1821).

¹⁰ *Ibid.*, 7:122 (Mar. 17, 1826).

Soon afterward James Creighton of Baltimore imported cattle especially adapted to the dairy. In 1820, Skinner of the *American Farmer* noted that he had inspected Creighton's herd and urged the farmers of the vicinity to pay more attention to improving the milking qualities of their cattle. Creighton's cattle were of the Alderney breed, latter known as Jerseys, which he had imported from the Channel Islands a few years before. By 1820, he was selling breeding stock at auction.¹¹ Maurice Wurts of Germantown, Pennsylvania, also imported and sold Alderneys, which he kept without admixtures with common stock from 1816, when he imported his first herd, until 1826, when 15 cows, bulls, and calves were advertised for sale.¹²

Skinner, in addition to editing the first important agricultural journal in the United States, purchased a 200-acre farm, 4 miles outside of Baltimore, on which he kept superior hogs, jacks, horses, and cattle. As he was keenly interested in livestock improvement, he regularly offered the use of his male animals to farmers at low rates. In March 1821, he formulated plans to stock his farm with Alderneys, Devons, and the Holderness and Teeswater strains of Shorthorn cattle. The following month he announced that his Teeswater, Alderney, and Devon bulls would be brought into town every other week and let to cows for the greater convenience of nearby farmers.¹³

Early in 1822, Skinner sold his Teeswater bull, Bergami, and imported a bull and two heifers from a leading Shorthorn breeder of England. At first, he contemplated building up a purebred herd from which bulls would be sold to neighbors or stand seasons at various taverns and farms in the Baltimore area. He later changed his plans, however, and after exhibiting them at the Maryland agricultural fair in May 1822, sold them to Colonel Edward Lloyd, a prominent farmer and politician of that State. Skinner received three engraved silver platters from the State agricultural society in recognition of his services to agriculture, and Lloyd became one of the leading cattle breeders in Maryland.¹⁴

Of the early breeders and importers of purebred cattle, none achieved quite the same distinction as did John Hare Powel of Philadelphia County,

¹¹ *Ibid.*, 2:79, 101 (June 2, 23, 1820).

¹² *Ibid.*, 2:79 (June 2, 1820), 8:296 (Dec. 1, 1826).

¹³ *Ibid.*, 2:404-408 (Mar. 16, 1821), 3:32 (Apr. 20, 1821).

¹⁴ *Ibid.*, 3:179 (Aug. 31, 1821), 4:40, 114 (Apr. 26, July 5, 1822).

Pennsylvania. He was a wealthy and widely traveled farmer who practiced crop rotation, made extensive use of clover, plaster of paris, and manure, and bred improved sheep and hogs as well as cattle. He began his importations of improved Shorthorns in 1822, and by 1825 he had at least 20 on his farm. Some had been imported and the remainder raised from the imported stock.¹⁵ The Powel stock spread rapidly and widely over Pennsylvania and surrounding States, stimulating other farmers to improve their stock by crossing with this superior breed and following his example by importing a few themselves. The proceedings of the Pennsylvania agricultural society for 1825 reveal that at least six livestock breeders in Pennsylvania besides Powel were raising improved Shorthorns, and one of them had ordered additional stock from England.¹⁶ Charles A. Barnitz of York, Pennsylvania, introduced Shorthorns into his community in 1828 and sold a fine bull and cow to T. Whitesides, who took them to his farm in Mifflin County.¹⁷

In May 1828, Skinner seemed highly gratified by the growing interest in better livestock, for he reported that the demand for Powel's stock greatly exceeded the supply. Powel had sold \$3,000 worth of breeding stock, mostly young bulls, since the previous October. Fifty animals, during that seven months, had been sold and distributed from Maine to Georgia. In addition, many of Powel's bulls were used for hire; one bull often brought in \$500 a year at \$8 to \$10 per cow.¹⁸ Samuel Jacques, founder of the famous Cream Pot breed, rented one of Powel's finest bulls in 1828 and took him to Charlestown, Massachusetts, to stand there. Powel was so fond of this bull that he refused to part with him more than one season.¹⁹ By 1830, Henry A. Carpenter of Lancaster County, Pennsylvania, had built up a herd of 100 Shorthorns, mostly from stock originally procured from Powel several years previously. In November of that year he intended to sell a number of cows, heifers, and bull calves in order to reduce his herd and disseminate the breed more widely over the country.²⁰ In the spring of 1831, Lewis Sanders

of Kentucky bought a young bull and three young cows of the Powel stock from Charles A. Barnitz. David Sutton of Lexington, Kentucky, introduced several animals of the Powel stock into his State a few years later, and several other Kentucky breeders, including Henry Clay, procured Powel cattle with which to improve their Shorthorn herds. Sanders reported that the cross was very beneficial.²¹

When Powel sold most of his herd at auction in June 1830 in order to make a trip to Europe, buyers gathered from most of the surrounding States. Twenty-one head of his Shorthorns averaged \$320 apiece, and members of perhaps the finest herd of cattle in America were taken to New York, Connecticut, New Jersey, several districts of Pennsylvania, and Maryland. At another sale on April 25, 1836, Powel disposed of 24 of his improved Shorthorns. Over half of these were purchased by breeders in Kentucky and Ohio, but some of the stock went to Crugar of Virginia, Purvis, Denny, Thomas, and Barney of Pennsylvania, Morgan of Hartford, Connecticut, and Harris of New Jersey. The seventy or eighty Shorthorns that J. Whitaker, the famous English breeder, sent to the United States in 1837, 1838, and 1839 were sold at public sales held at Powel's beautiful farm near Philadelphia.²² The story of Powel's stock indicates the potential influence of one superior herd kept in a pure state for even so short a time as fifteen years.

Much the same situation regarding cattle existed in New England at the beginning of the century as in other regions of the East. In a letter to Josiah Quincy, chairman of the committee on premiums of the Massachusetts agricultural society, written in 1820, S. W. Pomeroy of Brighton deplored the pitiful condition of dairy cattle in the United States, and especially in Massachusetts. He insisted that the dairy stock of New England had greatly deteriorated due largely to the poor care farmers gave their cattle during the winter and the sale of the best heifers for beef. This meant that the poorest specimens of most herds were kept for breeding purposes.²³

Although the so-called native stock of New England was largely descended from the North

¹⁵ *Ibid.*, 4:271 (Nov. 15, 1822), 7:297 (Dec. 9, 1825); Leavitt, "Attempts to Improve Cattle Breeds," 59; Thompson, *A History of Livestock Raising*, 130.

¹⁶ *American Farmer*, 7:35 (Apr. 22, 1825).

¹⁷ *Ibid.*, 10:29 (Apr. 11, 1828).

¹⁸ *Ibid.*, 10:55 (May 2, 1828).

¹⁹ *Ibid.*, 10:94 (June 6, 1828).

²⁰ *Ibid.*, 12:256 (Oct. 22, 1830).

²¹ *Cultivator*, n.s., 6:76-79 (March 1849); *Genesee Farmer*, 3:102 (Mar. 30, 1833).

²² *American Farmer*, 10:64, 89-91, 119 (May 7, June 4, 25, 1830); *Genesee Farmer*, 6:180 (June 4, 1836); *Country Gentleman*, 34:220-221 (Sept. 16, 1869).

²³ *American Farmer*, 2:304 (Dec. 15, 1820).

Devon cattle brought in by the early English settlers, the first conscious and sustained efforts to improve the cattle of the region began in the early nineteenth century through the importation of Shorthorns. The importation of a fine Shorthorn bull by Stephen Williams of Northboro, Massachusetts, in 1817, at the behest of the Massachusetts Society for Promoting Agriculture, was soon followed by that of the famous pair, Colebbs and Flora. During the same year, 1818, Gorham Parsons of Brighton, Massachusetts, imported *Fortunatus*, often called *Holderness*; and in a few years, other celebrated breeding stock was brought into New England by Theodore Lyman of Boston, Stephen Williams of Northboro, William Pierce of Portsmouth, New Hampshire, and others. Among these importations was a bull, *Young Denton*, which later became widely known in the annals of New England agriculture.²⁴

For a time in the first two decades of the nineteenth century, the Massachusetts agricultural society kept high-blood Shorthorns on its farm. It offered the service of bulls to farmers in the surrounding district and distributed calves throughout that region. In 1825, a member of the society stated that practically all of the better milch cows in the district near the society's farm were descendants of the imported animals crossed with the common stock.²⁵

The bull, *Colebbs*, thought to be a descendant of Charles Colling's widely known *Comet*, probably attracted more attention in following years than any other imported animal. He became the progenitor of the *Cream Pot* breed of cattle, bred by Samuel Jacques at Ten Hills Stock Farm, Charlestown, Massachusetts, and also produced many other offspring throughout Massachusetts. The *Cream Pot* breed originated from a cross between *Colebbs* and a superior native cow raised at Groton, Massachusetts. In 1839, Jacques had 40 cows and heifers and 10 bulls and bull calves of this breed, all raised by himself, and the breed had been carried into the third generation. His purpose had been to build up a breed of cattle which would

give more and richer milk than the Shorthorns and have lighter and less square frames. Aside from his part in creating the *Cream Pots*, *Colebbs* had, during the time Jacques owned him, served 400 cows and thus earned his owner \$3,800.²⁶

Superior Shorthorn cattle spread widely over New England in succeeding years as importations became more common and purebred stock began coming in from Pennsylvania and New York. Henry Watson of Connecticut had acquired a fairly large herd of these cattle by 1845, having procured his start from Stephen Williams, the owner of *Young Denton*, in the early days of importations. In succeeding years, he replenished his herd by buying bulls and cows from the *Powel* stock in Pennsylvania and from Stephen Van Rensselaer of New York. In 1830, Enoch Silsby of Massachusetts had imported more stock from England, from which Watson increased his herd. Orren Thompson of Thompsonville, Connecticut, also became a Shorthorn breeder, having among his stock the widely known bull, *Sir Dick*, and two very large cows, selected in England because of their high milking qualities.²⁷ Another active breeder in New England was John Welles of Dorchester, Massachusetts, who bred Shorthorns from the stock of the fine bull, *Admiral*, given to the Massachusetts Society for Promoting Agriculture by Admiral Isaac Coffin of the British Royal Navy in 1824. In 1829, Welles gave one of his best young bulls to L. Jenkins, a cattle breeder of Canandaigua in Monroe County, New York.²⁸ During the 1840s, the principal breeders in Massachusetts were Welles Lathrop and his brother of South Hadley. They owned, in addition to many high-grade Shorthorns, 25 of the pure breed, which were registered in George Coates's English Shorthorn herdbook.

The spread of better cattle throughout the Northeastern States continued as the old prejudice against innovation and anything except red native cattle slowly but steadily gave way. The *Boston Daily Advertiser* estimated in 1829 that the quality of cattle and other stock around Boston had improved more than 10 percent in the previous few

²⁴ Thompson, *A History of Livestock Raising*, 129-131. *Colebbs* and *Flora* were imported by Cornelius Coolidge of Boston and sold to Samuel Jacques in 1820. They probably remained his property until they died. Lewis F. Allen, ed., *The American Herd Book, Containing Pedigrees of Short Horn Cattle* (Buffalo, 1846), 76.

²⁵ *American Farmer*, 7:193 (Sept. 9, 1825), quoting the *Massachusetts Agricultural Journal*.

²⁶ *American Farmer* 4:40 (Apr. 26, 1822); *Genesee Farmer*, 9:166-167 (May 25, 1839); *Cultivator*, 7:134 (September 1840).

²⁷ *Cultivator*, n.s., 2:349 (November 1845); Thompson, *A History of Livestock Raising*, 130.

²⁸ *American Farmer*, 11:235 (Oct. 9, 1829); *Cultivator*, 8:162 (October 1841).

years as a result of agitation for better breeds, cattle shows, and the spread of imported breeds.²⁹ The evidence that the Shorthorn cattle multiplied is clear, but the individual breeders were too numerous to discuss here.

Nowhere in the East did the importation and breeding of Shorthorns become quite as extensive as in New York. There had been minor importations into New York in 1816 and 1822,³⁰ but Stephen Van Rensselaer seems to have started such ventures with renewed vigor in 1823 when he deposited \$1,000 in Liverpool for investment in improved Shorthorns to be brought to New York.³¹ L. Jenkins of Ontario County imported cattle at least as early as 1830 and advertised several cattle of imported stock for sale in 1831. He had been raising purebred Shorthorns for seven years. Two bulls, one a full blood and the other three-fourths Shorthorn, were standing the seasons regularly at his farm.³² In October 1830, Charles H. Hall of Harlem sold perhaps his first of many large lots of purebred Shorthorn cattle. This group included 27 bulls, cows, heifers, and bull calves, as well as several Leicester sheep. In commenting on this sale, Gideon B. Smith, then editor of the *American Farmer*, felt that the relatively low prices which these cattle brought portended well for the country, since less wealthy farmers were able to buy them, offsetting the tendency for the best bred cattle to be concentrated on the farms of a few wealthy men.³³

Another of the pioneer Shorthorn breeders in New York was C. N. Bement, a hotel keeper at Albany, who owned and improved Three Hills Farm, just outside the town, and later moved there.

²⁹ The newspaper was quoting the largest slaughtering firm in Boston; quoted in *American Farmer*, 11:240 (Oct. 9, 1829).

³⁰ Thompson, *A History of Livestock Raising*, 130. A Mr. Heaton is said to have imported Shorthorns, including one from Charles Colling's herd, into Westchester County as early as 1791. The 1816 importation was by a Mr. Cox of Rensselaer County. Matthew Bullock of Albany County bred this stock many years and imported 2 bulls in 1822. Allen, *The American Herd Book*, 75; *Cultivator*, n.s., 8:50 (January 1851).

³¹ *American Farmer*, 5:288 (Nov. 28, 1823). Allen, *The American Herd Book*, 78, says that John S. Skinner imported 1 bull and 2 heifers for Van Rensselaer in 1823.

³² *American Farmer*, 11:235 (Oct. 9, 1829), 12:27 (Apr. 9, 1830); *Genesee Farmer*, 1:95 (Mar. 26, 1831), 2:332 (Oct. 20, 1832).

³³ *American Farmer*, 12:255 (Oct. 22, 1830).

In 1833, Lewis F. Allen of Buffalo, soon to be an extensive breeder himself, and editor of the first American Shorthorn herdbook, reported to the *Genesee Farmer* his recent visit to Bement's farm and submitted the pedigrees of five of Bement's cattle for publication in the journal. He reported that Bement always had choice bulls and cows on hand for sale and had recently commenced the business of importing cattle and sheep from England.³⁴

At the Albany cattle fair on October 30 and 31, 1833, described by the editor of the *Genesee Farmer* as probably the finest livestock show ever held in the United States, nearly 150 improved cattle were exhibited. Improved Shorthorns were exhibited by at least ten contestants, among whom were Charles H. Hall, C. N. Bement, John Wilkinson of Duaneburgh, Stephen Van Rensselaer, Jr., of Watervliet, and John J. Viele of Rensselaer County.³⁵ The Monroe County fair, far to the west, attracted a respectable exhibit of Shorthorns also, including those of L. Jenkins, Abelard Reynolds, Warhom Whitney, and H. Hooker, who exhibited some highly valued Dutch Shorthorns.³⁶

Lewis F. Allen of Buffalo probably did more to improve the quality of cattle in New York than any other individual. Through Luther Tucker's *Genesee Farmer* and the *Cultivator*, he contributed a continuous stream of articles urging the farmers to breed better cattle and to take better care of those they possessed. He also traveled over the State inspecting various herds and giving them publicity through the pages of agricultural journals.³⁷ As evidence of the ability of a few choice animals to influence the general quality of stock in a region, Allen related how a Mr. Otto of the Holland Land Company had procured a bull early in the century from John Hare Powel and offered his services to the land company settlers in Genesee, Cattaraugus, and Chautauqua counties. This bull lived many years, spending successive seasons in each of these three counties, and producing a marked influence on the stock of that region. Allen stated that much of the best stock around Buffalo and Black Rock and in the three

³⁴ *Genesee Farmer*, 3:306-307 (Sept. 28, 1833); *Cultivator*, 6:199 (December 1839). Two years later Bement had 24 improved Shorthorns. *Genesee Farmer*, 5:50-51 (Feb. 14, 1835).

³⁵ *Genesee Farmer*, 3:354-355 (Nov. 9, 1833).

³⁶ *Ibid.*, 3:337 (Oct. 26, 1833).

³⁷ *Ibid.*, 2:316, 332 (Oct. 6, 20, 1832), 3:306, 404-406 (Sept. 28, Dec. 21, 1833).

counties named, had descended from this bull.³⁸ Allen also reported that the stock in highest repute in western New York in 1833 had descended from a half-Devon-half-Shorthorn bull owned for many years by L. Jenkins of Ontario County.³⁹

In 1833 or early the next year, Allen began raising Shorthorns himself, and for many years he and his brother, A. B. Allen, raised some of the best stock in the country on their Grand Island and Black Rock farms. The Allens did good work in spreading better stock by selling purebred yearling bulls, good native cows in calf by improved Shorthorn bulls, and half-blood bull calves.⁴⁰ When the cattle purchased in England by the Ohio Importing Company began to move through New York to their destination in the Scioto Valley in 1834 and 1835, Allen attempted to form a similar company in western New York. He kept soliciting aid for such a scheme throughout the better part of a year, but it apparently failed to materialize for want of support.⁴¹

It was Lewis F. Allen, too, who established an American Shorthorn herdbook in 1846. This was something which had long been desired by farsighted breeders and editors of agricultural papers. The first edition gave the pedigrees of about six hundred bulls and cows then being used for breeding purposes. Allen was considerably discouraged because many breeders failed to send in the pedigrees of their stock, but there is no way of determining the proportion of Shorthorns included.⁴² The book is certainly no criterion for determining the amount of Shorthorn stock in the country, for most of it was unregistered and had been crossed with common cattle.

Other prominent breeders in western and central New York were Thomas Weddle of East Bloomfield, Francis Rotch of Butternuts in Otsego County, and Willis Gaylord, William Fuller, Henry Ellery, and several others of Onondaga

County.⁴³ Weddle sold his herd, consisting of 20 purebred bulls, cows, and heifers, at public auction in May 1838. After an excursion through central and western New York in 1839, during which he saw too many Shorthorn bulls to mention individually, A. B. Allen stated that Francis Rotch of Otsego County was probably the most scientific breeder he had met. In order to build up his herd more rapidly, Rotch had decided not to sell a single female for at least two years.

The general upsurge of blooded-livestock importation which flourished in the United States for the decade or more before 1850 greatly increased the number of breeders in New York. Luther Tucker remarked in August 1839 that hardly a ship from England docked in New York which did not bring imported stock. Most of the cattle were destined for Ohio, Kentucky, Pennsylvania, and New York.⁴⁴ A reporter for the *Cultivator* expressed surprise in 1843 that western New York could produce the many fine specimens of Shorthorns that were displayed at the State fair in Rochester that fall.⁴⁵

The new breeders who became the leading Shorthorn men in New York after 1840 were James M. Sherwood of Auburn, George Vail of Troy, E. P. Prentice of Albany, James Lenox of Dutchess County, J. W. Bacon of Waterloo, Z. B. Wakeman of Herkimer, T. H. Hyatt of Rochester, and L. G. Morris of Mount Fordham.⁴⁶ Sherwood had about forty head of prime Shorthorns on his 300-acre farm near Auburn, and he consistently took the highest prizes at livestock shows.⁴⁷ E. P. Prentice of Mount Hope near Albany became well known to the farmers of New York for his successful efforts in the introduction of improved cattle. He started his herd with a pair purchased in 1834 from Stephen Van Rensselaer and increased it both by purchase and by importation of registered stock. One of the largest sales of improved Shorthorns ever held in the East before 1850 occurred at Mount Hope on June 25, 1845, when Prentice disposed of 41 animals from his fine herd.⁴⁸ George Vail of Troy built up a herd of about 45

³⁸ *Farmers' Register*, 9:367-372 (June 1841), quoting the *Cultivator*.

³⁹ *Genesee Farmer*, 3:404-406 (Dec. 21, 1833).

⁴⁰ *Ibid.*, 5:255 (Aug. 8, 1835), 8:151 (Apr. 28, 1838), 9:208 (June 29, 1839); *Cultivator*, n.s., 9:198 (May 1852).

⁴¹ *Genesee Farmer*, 4:268-269 (Aug. 23, 1834), 5:308, 375, 385 (Sept. 26, Nov. 21, Dec. 5, 1835).

⁴² Allen, *The American Herd Book*, especially the introduction; *Cultivator*, 7:162 (October 1840), n.s., 2:63-64 (February 1845). Skinner continually stressed the importance of keeping careful records of imported and improved stock and its owners.

⁴³ *Genesee Farmer*, 8:8 (Jan. 6, 1838), 9:268, 358-359 (Aug. 24, Nov. 9, 1839).

⁴⁴ *Ibid.*, 9:273 (Aug. 31, 1839).

⁴⁵ *Cultivator*, 10:154 (October 1843).

⁴⁶ *Ibid.*, n.s., 2:11, 43-44 (January, February 1845), n.s., 3:319-323 (October 1846), n.s., 7:186 (May 1850).

⁴⁷ *Ibid.*, n.s., 2:229, 250 (July, August 1845).

⁴⁸ *Ibid.*, n.s., 2:43-44 (February 1845).

Durhams between 1839 and 1846. In 1851, he sold about 30 head because he no longer had room on his farm for all of them.⁴⁹ L. G. Morris of Mount Fordham in Westchester County who bred Shorthorns, Devons, and Ayrshires, each separately, held yearly sales of his blooded stock and in 1851 disposed of about 50 head for the same reason.⁵⁰

That there had been a wide dissemination of Shorthorn stock in the two decades prior to 1850 is clear. This fact is plainly demonstrated by the premiums for fine cattle awarded by the New York agricultural society at its fair at Albany in 1850. At least ten exhibitors were awarded prizes for the best Shorthorns of different classes.⁵¹ In considering such an exhibition, it must be kept in mind that all such shows were essentially local affairs, for few owners of prize livestock would risk transporting their animals over long distances. The ten exhibitors, therefore, could have been only a small percent of the owners of fine Shorthorns in the State.

Shorthorns were not so popular in the South where pastures were poor and farmers specialized in the production of tobacco, cotton, and grain. Many farmers believed that these large cattle could not survive on the poor care livestock usually received in the South. There were some good herds, however, and it was commonly believed that a mixture of Shorthorn blood with the common stock would be advantageous, in that it might lead Southerners to bestow more care and attention on their cattle.⁵²

Most of the improved Shorthorn stock were moved into the South from Pennsylvania and Maryland. In 1827, John Hare Powel sent three bulls to the Agricultural Society of South Carolina, with the view of improving the cattle of that State.⁵³ Three years later, Richard K. Meade of Winchester, Virginia organized a company in Frederick County to breed and disseminate Shorthorns. The original stock came from Powel's herd, and as bull calves reached maturity they were sold to farmers in different parts of the State.

⁴⁹ *Ibid.*, n.s., 3:223 (July 1846), n.s., 8:160 (April 1851).

⁵⁰ *Ibid.*, n.s., 8:160 (April 1851), ser. 3, 1:37 (January 1853).

⁵¹ *Ibid.*, n.s., 8:334 (October 1850).

⁵² *Farmers' Register*, 4:571-572 (January 1837).

⁵³ *American Farmer*, 9:316 (Dec. 21, 1827), quoting the *Charleston Courier*.

The demand for this and Meade's private stock soon became greater than the supply, most of it going to lower Virginia. Meade also attempted to build up a milk breed by crossing Shorthorns with the best native cows he could procure. After his death, his stock was scattered widely over Virginia.⁵⁴

Corbin and J. M. Warwick of Goochland raised pedigreed Shorthorns for several years. They bought some of Meade's stock and imported bulls and heifers from England at least once. They also attended the sales of English cattle frequently held near Philadelphia and brought fine stock to their farm.⁵⁵ James Sampson of Goochland also brought registered Shorthorns into Virginia. At a Philadelphia sale in 1837, Corbin Warwick, Richard Sampson, and a Mr. Cunningham bought eight cows and bulls from fine stock sent to the United States by J. Whitaker. Two years later, the Warwicks bought two more English cows at Philadelphia. J. R. Richardson of Wythe County sometimes purchased cattle in New York, once buying six head from James M. Sherwood of Auburn.⁵⁶

Robert Dunn of Oak Hill near Petersburg received high praise in the *Farmers' Register* for the special attention he devoted to raising and caring for his Durham Shorthorn cattle, of which he had several, both of pure and mixed blood. Although distemper, the most dangerous enemy of cattle in the South, sometimes threatened his cattle, Dunn succeeded in keeping them healthy and thriving by providing them with good food and shelter.⁵⁷

The reports of the agricultural societies and fairs during the 1830s indicate that a considerable number of pure and mixed Shorthorns were scattered through Virginia. In Campbell County, John Smith and William Radford of Bedford exhibited Shorthorns in addition to several other good cattle of mixed blood. In Buckingham, T.

⁵⁴ *Ibid.*, 11:346 (Jan. 15, 1830), 12:285, 362 (Nov. 19, 1830, Jan. 28, 1831); *Farmers' Register*, 1:350, 487 (November 1833, January 1834).

⁵⁵ *Ibid.*, 1:127 (July 1833), 5:377-378 (October 1837), 7:175 (March 1839).

⁵⁶ *Cultivator*, n.s., 9:225 (June 1852). In 1836 Levi Lincoln sold a fine Shorthorn cow to a Virginian at the fair of the Massachusetts agricultural society. *Genesee Farmer*, 6:353 (Nov. 5, 1836). That same year a Mr. Poor of Virginia bought 4 Shorthorns and 1 Alderney at a sale of Dr. Hosack's cattle at Hyde Park, New York. *Ibid.*, 6:180 (June 4, 1836).

⁵⁷ *Farmers' Register*, 1:346 (November 1833).

M. Bondurant, R. G. Morris, and William Moseley owned good cattle of mixed Durham, Devon, and Hereford breeds. At a fair held near Lynchburg, fine Shorthorns, Devons, and Alderneys were exhibited and the committee in charge felt that no better showing had ever been seen in the State. John P. Marshall and William Gaines of Charlotte County owned three-quarter-breed Shorthorns. Edmund Ruffin, editor of the *Farmers' Register* reserved his praise for the fair held at Henrico in May 1841, at which he said the exhibit of fine animals was especially notable. W. B. Snyder, Abraham Warwick, and a Mr. Colquitt won premiums with their Durham Shorthorns. In some of the exhibitions mentioned above, cattle that the judges considered fine specimens failed to take premiums because they had no pedigrees.⁵⁸

A letter by B. R. Carrol, editor of the *Southern Agriculturist*, at Charleston, South Carolina, indicates that there was a considerable influx of improved cattle into the Charleston area during the 1830s. He wrote in 1840 that he had seen many Shorthorns and Devons and a few Ayrshires imported into that vicinity during the previous six years. Carrol was attempting to overcome the prevalent idea that Shorthorns could not thrive in the South. He contended that they were the best cattle for any area providing their owners would give them proper care. If ill treated, he stated, no cattle would thrive.⁵⁹ Wade Hampton, who bred improved Shorthorns, wrote that cattle brought to the South from England or the North could usually be kept healthy if brought in during the fall, fed well the first winter, and removed to a high cool pasture the first summer.⁶⁰

In the first half of nineteenth century, Devon cattle, though not preserved intact as often as the Shorthorns were, had probably been introduced more extensively into the eastern United States than any other breed. Devons had been brought from the Mother Country by the settlers of New England and even as late as 1840 probably formed the greater portion, in different grades, of the cat-

tle of the North and Middle Atlantic States.⁶¹ Improved Devons began to arrive early in the nineteenth century with the gift from Coke in England to Robert Patterson of Baltimore, as already related. These cattle became well established in Maryland, where they were bred for many years by members of the Patterson family, Henry Thompson, and John P. E. Stanley of Baltimore. By 1845, George Patterson had about sixty head of the pure breed on his well improved farm in Carroll County, about 22 miles west of Baltimore. John Barney of Delaware also became a confirmed Devon partisan, and for a while some were owned by Edmund F. Noel of Essex County, Virginia.⁶²

Rufus King of Long Island, New York, probably received a gift of improved Devons from Coke at the same time Patterson received his, but their extensive dissemination began after Lemuel Hurlbut of Winchester, Connecticut, had established his herd, about 1826. That fall he exhibited 28 head at a fair in Litchfield, Connecticut, where the committee on cattle affirmed that they were among the finest cattle ever seen in that district. Hurlbut had already disposed of several hundred head of mixed and a few full-blood cattle, many of them from the extremely prolific bull, Holkham, he bought from Patterson in 1819, and he continued for many years to be known as the outstanding breeder of improved Devons in the country. His cattle were especially popular in New England where Devons were often preferred to Shorthorns. After his death, a correspondent of the *Cultivator* stated that Hurlbut was among the first to import Devons into the United States and the first to import them into New England. According to the same writer, Hurlbut "raised and sold over fifteen hundred head of Devons" during the thirty-seven years he was engaged in the business. In addition, he made extensive crossings with other breeds.⁶³

The Massachusetts Society for Promoting

⁵⁸ Thompson, *A History of Livestock Raising*, 131; *Farmers' Register*, 6:399 (October 1838), quoting the *Genesee Farmer*.

⁵⁹ *American Farmer*, 7:416 (Mar. 17, 1826), 10:144 (July 18, 1828); *Genesee Farmer*, 1:145 (May 14, 1831); *Cultivator*, n.s., 2:200 (June 1845), 6:120-122 (April 1849); *Southern Cultivator*, 3:147 (October 1845).

⁶⁰ *American Farmer*, 8:313 (Dec. 22, 1826); *Cultivator*, 4:98-99 (August 1837), n.s., 8:50 (January 1851), ser. 3, 5:174 (June 1857).

⁵⁸ *Ibid.*, 2:297, 487 (October 1834, January 1835), 3:502 (December 1835), 5:609-615 (January 1838), 6:290, 693 (August, November 1838), 7:753 (December 1839), 8:121 (February 1840), 9:360-361 (June 1841).

⁵⁹ *Ibid.*, 8:303-304 (May 1840). Other breeders of purebred cattle in South Carolina were Jenkins Mikell, a Dr. O'Hear, and a Dr. Harleston.

⁶⁰ *Ibid.*, 10:108-109 (March 1842).

Agriculture imported six Devons, including one born in passage, from the best herd in England in 1845, and the society was still breeding them on Elias Phinney's farm at Lexington in 1849.⁶⁴

L. G. Morris, before mentioned as one of the principal Shorthorn importers and breeders, bought several Devons at the cattle show of the Royal Agricultural Society at Exeter, England, in 1850 and sent them back to his farm in Westchester County, New York.⁶⁵ Ambrose Stevens and a Mr. Vernon of New York City also imported Devons to a considerable extent prior to 1850.

In 1849, according to the *Cultivator*, the outstanding breeders of Devon cattle in the United States were George Patterson of Baltimore, Lemuel Hurlbut, H. N. Washborn of Butternuts, New York, and E. P. Beck of Sheldon, Wyoming County, New York. The last had been engaged in breeding them for many years and regularly won prizes at the New York fairs.⁶⁶ Another prominent breeder of Devons was William Garbutt of Wheatland, Monroe County, New York, who consistently maintained that they were superior to Shorthorns for the northern pastures and that their small size was more the fault of breeders than of the cattle. Improved Devons spread rapidly, and by 1845 they were exhibited at most of the county and State fairs.⁶⁷ At the New York State fair at Albany in October 1850, premiums were awarded to six New York Devon breeders and to three from New England.⁶⁸

Devons were also introduced into Virginia, South Carolina, and Georgia, where breeders often preferred them to Shorthorns because of their alleged hardiness. They were exhibited at most of the Virginia fairs already mentioned, and B. R. Carroll of Charleston, South Carolina, stated that he had seen many Devons brought into that area during the 1830s. Richard Peters of Atlanta and J. B. and J. V. Jones of Burke were the leading breeders of Devons in Georgia. Peters purchased his first stock from Patterson and Hurlbut about 1848, and within the next two or three years he had

acquired 27 purebred Devons from them. He had experimented with Ayrshires, Durhams, and natives also but thought Devons by far the best cattle for the South.⁶⁹

The Hereford breed did not catch the popular fancy as the Shorthorns did, and they were not bred extensively before 1850. Nevertheless, many breeders had become acquainted with their possibilities and the ground was prepared for their wide dissemination at a later period.

Among the first Herefords to reach the United States after Henry Clay's importation into Kentucky in 1817 were those sent to the Massachusetts agricultural society in 1824 by Sir Isaac Coffin of the British Royal Navy. They consisted of a bull, Sir Isaac, and a heifer, which were kept on a farm near Northampton, Massachusetts, where they produced a numerous progeny.⁷⁰ There is some evidence that W. C. Rives of Virginia also imported Herefords, probably long before 1840. It is also likely that a Mr. Edward of Rahway, New Jersey, imported some Herefords about 1820, but if so the importation went largely unnoticed.⁷¹ C. N. Bement of Albany, New York, imported an excellent Hereford bull, Dallimore, and some cows and heifers in 1839, when he became convinced that Herefords and Devons could thrive better on scanty pasture and ordinary care than Shorthorns.⁷²

The outstanding breeders of Herefords before 1850 were Erastus Corning and William H. Sotham, who began their importations from England in 1840 and bred them extensively during the next decade. Their farm, about 2 miles outside Albany became known as Hereford Hall in honor of its large herd of fine cattle. Within five years after their first importation, they owned about seventy head, one of their bulls having cost \$1,000 in England, and another \$2,000.⁷³

Corning and Sotham did for the Herefords in the

⁶⁴ *Ibid.*, n.s., 2:357 (November 1845), n.s., 6:140-141 (May 1849).

⁶⁵ *Ibid.*, n.s., 7:315 (September 1850); *Southern Cultivator*, 9:82-83 (June 1851).

⁶⁶ *Cultivator*, n.s., 6:120, 292 (April, September 1849).

⁶⁷ *Genesee Farmer*, 3:337, 354 (Oct. 26, Nov. 9, 1833), 9:236 (July 27, 1839); *Cultivator*, 10:154-157 (October 1843).

⁶⁸ *Cultivator*, n.s., 8:334 (October 1850).

⁶⁹ *Farmers' Register*, 2:297, 487 (October 1834, January 1835), 3:502 (December 1835), 5:609-615 (January 1838), 6:290, 693 (August, November 1838), 7:753 (December 1839), 8:121 (February 1840), 9:360-361 (June 1841); *Southern Cultivator*, 9:161-163 (November 1851).

⁷⁰ Thompson, *A History of Livestock Raising*, 130-131; *American Farmer*, 9:266 (Nov. 9, 1827).

⁷¹ *Cultivator*, 7:104 (July 1840); *Genesee Farmer*, 3:69-70 (Mar. 2, 1833).

⁷² *Cultivator*, 7:125 (August 1840).

⁷³ Thompson, *A History of Livestock Raising*, 131; *Cultivator*, 7:104 (July 1840), n.s., 2:133 (April 1845).

Northeast what John Hare Powel had done for Shorthorns in the Middle Atlantic States twenty years previously. In 1845 they sold two heifers to Daniel Webster, who bred them on his farm at Marshfield, Massachusetts. The same year they sold a bull, a cow, and a heifer calf to a Mr. Stetson of Astor House, New York. L. G. Bingham of Williston, Vermont, purchased four cows and a bull in 1846 and built up a good herd during the next three years.⁷⁴ Edward Wells of Johnstown, New York purchased eight or ten head and for several years bred them on the same farm with purebred Shorthorns in order to compare the feeding and grazing qualities of the two breeds.⁷⁵ A. G. Summers of Pomaria, South Carolina, purchased of Corning and Sotham the premium bull of this breed, along with a superior heifer, at the New York State fair in 1844.⁷⁶ Two years later he published a series of letters in the *Southern Cultivator* of Augusta, Georgia, through which he attempted to acquaint Southern farmers with the breed. Summers believed that crossing with the common stock proved to be the most profitable method of employing purebred cattle in the South and that Herefords were especially well suited for this purpose.

Thomas B. Campbell of Westfield, New York, stated, in a letter to the editor of the *Cultivator* in 1849, that the Herefords had been introduced into Chautauqua County a few years earlier and had produced a marked improvement in the cattle there. He believed that "The cross with the Hereford and our cows (they being generally of the short horned descent,) proves to be one of the greatest improvements in the breed of the Chautauque cattle that has yet been introduced, and will add much to the interest of the breeder and farmer."⁷⁷

Of strictly dairy breeds, only the Alderneys and Ayrshires were introduced to an appreciable extent before 1850, although much attention was devoted to improving the dairy qualities of cattle, especially in the North Atlantic States. Most of the efforts in this direction resulted in crossing good milkers of the common stock with Shorthorns or in more

selective breeding of common cattle. Although most of the Shorthorn breeders contended that their breed possessed far better milking qualities than any other cattle in the country, it was commonly believed in New England and in the South that none of the known breeds uniformly gave more milk or butterfat than others.⁷⁸ Then too, most of the breeders before 1850 were seeking an all-purpose cow that combined both beef and milking qualities. This fact accounts for much of the popularity of the Shorthorns, since they, in addition to being excellent beef cattle, gave more milk than almost any other breed. John Hare Powel's Shorthorns were especially celebrated as milkers.⁷⁹

In spite of these retarding factors, Alderneys, celebrated for their exceptionally rich milk, were among the earliest cattle imported from Europe. The Alderney cattle imported from the Channel Islands before 1820 by James Creighton of Baltimore and Maurice Wurts of Philadelphia have already been noticed. It is probable that Reuben Haines and Richard Platt of Pennsylvania also raised Alderneys at an early date.⁸⁰ During at least a part of the year 1821, John S. Skinner kept an Alderney bull on his farm near Baltimore to serve his neighbors' cows at \$3 each.⁸¹ Evidence that Alderneys were known in Pennsylvania for several years previous to 1820 occurs in a letter from John Hare Powel to G. W. Featherstonhaugh, written in 1823. In comparing Shorthorns and Alderneys, Powel stated that he had had ample experience with the latter breed for a period of fifteen years.⁸² There were also introductions of Alderneys into Massachusetts. The ever-active Massachusetts Society for Promoting Agriculture imported two bulls and two cows as early as 1817, and other introductions are indicated in Henry Colman's report on the agriculture of Essex County.⁸³

The early Alderney cows, though famous for the richness of their milk, fell into disrepute with the

⁷⁸ *Farmers' Register*, 1:79-80 (July 1833), quoting the *New England Farmer*, 9:377 (June 15, 1831).

⁷⁹ *American Farmer*, 7:332 (Jan. 6, 1826), 12:256 (Oct. 22, 1830).

⁸⁰ *Ibid.*, 2:79 (June 2, 1820).

⁸¹ *Ibid.*, 2:416 (Mar. 23, 1821).

⁸² *Genesee Farmer*, 2:373 (Nov. 24, 1832), 3:69-70 (Mar. 2, 1833).

⁸³ *Farmers' Register*, 6:98-99 (May 1838); *Country Gentleman*, 33:140 (Feb. 18, 1869).

⁷⁴ *Cultivator*, n.s., 3:260 (August 1846), 6:262 (August 1849).

⁷⁵ *Ibid.*, n.s., 7:61 (January 1850).

⁷⁶ *Ibid.*, n.s., 2:88 (March 1845); *Southern Cultivator* 4:171, 189 (November, December 1846), 5:12 (January 1847).

⁷⁷ *Cultivator*, n.s., 6:189 (June 1849).

coming of the Shorthorns because of their lack of hardiness and poor physiques and because of the demand for a breed which would combine both beef and milking qualities. However, since there were breeders who believed it would be better to keep these qualities separate, it is not strange that they became popular at a later date under different circumstances and in an improved form.⁸⁴

Interest in Alderney cattle revived about 1845 when they began to be called Jerseys. That year a writer in the *Cultivator* estimated that two thousand of the breed were annually exported from the island of Jersey, but he gave no indication of the number coming to the United States.⁸⁵ Five years later another writer in the same periodical described the great improvement that had lately been achieved among the Alderneys or Jerseys by Colonel J. Le Couteur of Jersey. It was not then generally known whether any of the improved breed had been introduced into the United States.⁸⁶ Daniel Webster had Alderneys on his farm at Marshfield, Massachusetts, in 1849, but it is uncertain whether they were of the improved or unimproved breed.⁸⁷

Apparently the first of the improved Alderneys in the United States were raised by Nicholas Biddle of Philadelphia, Dr. Philip Syng Physick of Germantown, Pennsylvania, and R. L. Colt of Patterson, New Jersey. Colt wrote the editor of the *Cultivator* in 1850 that he had as large a herd of Alderneys as any one in the country. He had imported stock from Le Couteur and obtained others from Biddle and Physick.⁸⁸ Although the trustees of the Massachusetts Society for Promoting Agriculture imported several Jersey cows in 1850 or 1851, it was not until after 1850 that Jerseys began to enter the United States in large numbers, and not until 1860 that they were generally known as Jerseys.⁸⁹

Ayrshires were probably introduced to a greater extent before 1850 than either the early or improved Alderneys, but their popularity came later. Among the first Ayrshires known in the country

were those imported by H. Hills of Hartford County, Connecticut, about 1823. That year a bull of this importation won first prize at the local fair, but many of the farmers disliked the breed because of their white markings. The old New England prejudice against any color but red, which discredited the Shorthorns, made it difficult for any new breed to become established. John P. Cushing of Watertown, Massachusetts, and the Massachusetts Society for Promoting Agriculture imported several more cattle of this breed between 1835 and 1839, and Cushing had distributed 21 head among neighboring farmers before 1841.⁹⁰

Ayrshires did not gain much favor in the United States until the 1840s when they began to attract attention in New England because of their hardiness and superior milking qualities. George Randall of New Bedford, Massachusetts, imported two Ayrshire bulls and three cows about 1840, and in 1841 he owned several half-breed cows in addition to his purebreds. He stated that though his pastures were skimpy, one of his cows had produced over 40 pounds of butter per month through the summer of 1841. Randall's herd was sold at public auction in 1846, by which time it consisted of 8 cows, 13 heifers, and 2 bulls.⁹¹

The Massachusetts Society for Promoting Agriculture imported four more Ayrshire cows and a bull in 1845 and bought one cow at Randall's sale the next year. Four years later the society was still breeding Ayrshires on the Phinney farm near Lexington. A correspondent of the *Cultivator* reported at that time that the Ayrshires were highly esteemed by the farmers of Massachusetts for their hardiness and ability to adapt themselves to the northern climate.⁹²

Daniel Webster was reported in 1846 to have a superior herd of Ayrshires on his farm at Marshfield, Massachusetts, where he was making a comparative study of the Ayrshire, Alderney, and Devon breeds. He made additional importations during that year and again in 1849.⁹³

The Ayrshire breed spread into the Pittsfield

⁸⁴ *American Farmer*, 4:55 (May 10, 1822), 12:171 (Aug. 13, 1830).

⁸⁵ *Cultivator*, n.s., 2:172-173 (June 1845).

⁸⁶ *Ibid.*, n.s., 7:176-177 (May 1850); *American Jersey Cattle Club, Herd Register*, 1:17 (New York, 1871).

⁸⁷ *Cultivator*, n.s., 6:9-11 (January 1849).

⁸⁸ *Ibid.*, n.s., 7:212 (June 1850).

⁸⁹ *Ibid.*, n.s., 8:347 (October 1851); ser. 3, 8:192 (June 1860).

⁹⁰ *American Farmer*, 7:278 (Nov. 18, 1825); Lewis F. Allen, *American Cattle: Their History, Breeding and Management* (New York, 1868), 126; *Farmers' Register*, 7:249 (April 1839), 9:146-149 (March 1841).

⁹¹ *Cultivator*, 8:58, 181 (April, November 1841), n.s., 3:323 (October 1846).

⁹² *Ibid.*, and n.s., 2:367 (November 1845), n.s., 6:140-141 (May 1849).

⁹³ *Ibid.*, n.s., 3:355 (November 1846), n.s., 6:9-11 (January 1849).

area of Berkshire County, Massachusetts, when one of the bulls imported by the State agricultural society was brought there in the middle forties and when S. G. Ward made an importation about 1846. Daniel Barnes of Berkshire County also raised purebred Ayrshires which he acquired from Ward's stock.⁹⁴ The breed spread into Connecticut before 1850. A purebred bull, a cow, a 2-year-old heifer, and a calf were advertised for sale in January of that year by Robins Battell of Norfolk. They also entered Vermont when Wightman Chapman was given a fine registered bull by Cushing of Massachusetts.⁹⁵

Ayrshires were common enough in New York by 1845 to have a separate class created for them at the State fair that year. However, there was little competition; C. N. Bement of Albany, being allowed to "sweep the board" in that class.⁹⁶ E. P. Prentice, also of Albany, began importing Ayrshires from Scotland in 1842 and was selling breeding stock to farmers in Ohio by 1850.⁹⁷ An editorial in the *Cultivator* for 1846 noted that the Shakers of New Lebanon, New York, who were often complimented for their fine dairy stock, had recently acquired some Ayrshires and were crossing them with Shorthorns.⁹⁸ Other breeders of Ayrshires in New York were A. Van Bergen of Cossack Landing, Greene County, and L. G. Morris, of Mount Fordham, Westchester County.⁹⁹ Further indications of the spread of the breed through the State were the advertisements of Ayrshires for sale which appeared from time to time in the agriculture press.¹⁰⁰

The only evidence that Ayrshires were introduced into the South before 1850 appears in the letter by B. R. Carroll of Charleston which has already been cited. In it he stated that he had seen Ayrshires, along with other improved breeds, imported into Charleston and its vicinity during the previous six years.¹⁰¹

Obviously the introductions of Ayrshires noted here are only the beginning of the extensive

dissemination of this breed which occurred during the decade after 1850, but enough had come in for the dairy farmers of the North Atlantic States to become acquainted with their hardiness and fitness for the dairy. The next few years were to see the rapid spread of Ayrshires in central New York, Pennsylvania, New Jersey, and Maryland.

The only other breeds of cattle known to have been introduced into the eastern United States prior to 1850 were a few Holsteins in the dairy region around Baltimore, the so-called Dutch Shorthorns introduced into Vermont by William Jarvis about 1810, and some "improved" Dutch cattle imported into New York by Herman Le Roy. Of the former, E. Kinley of Baltimore owned about twenty-five half to full bloods which he advertised for public sale in 1845.¹⁰² Jarvis continued to breed the Dutch cattle in Vermont for at least twenty years, and they became common in the vicinity of Hartford, Connecticut, and along the borders of Vermont and New Hampshire. H. Hooker of North Rochester, New York, obtained some of these cattle and was crossing them with improved Shorthorns in 1834.¹⁰³ Although they were usually called Dutch Shorthorns, some breeders declared they were merely one of the many inferior types of cattle often passed off as Shorthorns. The "improved" Dutch cattle were imported by Herman Le Roy, a prominent merchant of New York, who kept them on his farm near New York City during the early and middle 1820s. His son, Edward A. Le Roy, took some of them to his farm on the Genesee River and soon after 1833 began crossing them with Shorthorns. The pure breed was eventually lost in the herds of both father and son. In describing these cattle, Lewis F. Allen, who saw them about 1833, said: "They were large, well-spread cattle, black and white in color, and remarkable for their uncommon yield of milk." There seems little doubt that the cattle imported by Jarvis and the "improved" Dutch cattle were both early types of the modern Holstein.¹⁰⁴

All through the period under discussion, a continuous and often heated controversy over the

⁹⁴ *Ibid.*, n.s., 8:246-247 (July 1851).

⁹⁵ *Ibid.*, n.s., 2:257 (August 1845), n.s., 7:64 (January 1850).

⁹⁶ *Ibid.*, n.s., 2:313-315 (October 1845).

⁹⁷ *Ibid.*, n.s., 3:215 (July 1846), n.s., 7:61 (January 1850).

⁹⁸ *Ibid.*, n.s., 3:304-305 (October 1846).

⁹⁹ *Ibid.*, n.s., 3:250-251 (August 1846).

¹⁰⁰ *Ibid.*, n.s., 2:296 (September 1845).

¹⁰¹ *Farmers' Register*, 8:303-304 (May 1840).

¹⁰² *Genesee Farmer*, 4:6 (Jan. 4, 1834); *Cultivator*, n.s., 2:328 (October 1845); Thompson, *A History of Livestock Raising*, 132.

¹⁰³ *Genesee Farmer*, 4:6, 45 (Jan. 4, Feb. 8, 1834).

¹⁰⁴ Allen, *American Cattle*, 166-173; *Genesee Farmer*, 4:164 (May 24, 1834); *Country Gentleman*, 31:166 (Mar. 5, 1868).

comparative merits of different breeds was carried on through the pages of the agricultural journals. Each writer had his favorite breed of cattle or contended that none of the imported breeds were adapted to the pastures and climate of the United States. The so-called Battle of the Breeds, which supposedly began in the United States about 1850, actually commenced when the first foreign breeds were introduced and continued throughout the period.¹⁰⁵ A writer who signed his name "Timothy Clodhopper" stated the situation quite clearly when he wrote to the editor of the *American Farmer* in 1822, chiding the sponsors of purebred cattle for their exaggerated claims and ridiculous advertising. First it was the Alderneys, he said, which were supposed to be best "fitted for every purpose; suited to every soil; peculiarly adapted to our climate; to all but our purses." Then it was Devons, and next Shorthorns—"long horns, middle horns, and no horns," must yield to "short horns" in fame." Now that Devons were being "puffed" again, Clodhopper had become sorely puzzled and wanted the editor to help him decide which breed to buy. Skinner gave the typical answer of the agricultural editors when he stated that he hoped the controversy would continue until all the better breeds were introduced; then they could be chosen for the particular purposes and areas to which each was best fitted.¹⁰⁶

One of the most interesting controversies as to how American farmers should improve their stock of cattle commenced in 1825 between Timothy Pickering of Massachusetts and John Hare Powel of Pennsylvania. In his series of articles "On Improving the Native Breed of New England Cattle," first published in the *New England Farmer*, Pickering contended that American farmers should devote more effort to improving their own cattle by selecting their best animals for breeding purposes rather than by spending large sums of money for imported stock. He believed there was no evidence that English dairies were superior to those of New England and cited the famous Oakes cow of Danvers, Massachusetts, and others, to show that the native New England stock could produce excellent milkers. Pickering argued that New Englanders should follow the example of Bakewell by developing their own breed of cattle.

Powel, however, considered Pickering's views extremely short sighted, since it would be much easier and quicker to build up the American herds by crossing with previously tested imported breeds, or by maintaining the imported stock without admixture. He also thought there was strong evidence that the Oakes cow had descended from an early obscure importation. At any rate, she was admittedly much larger and better formed than most native cattle. Powel supported his position by presenting letters from several owners of Shorthorns, all maintaining that the imported cattle were much superior, for both beef and milk, to any of the natives. Powel also strongly contested the common idea that highly bred cattle could not produce milk and beef on light pastures.¹⁰⁷

Pickering by no means stated the position of all New England breeders. The Massachusetts Society for Promoting Agriculture found that practically all of the better milk cows in the region of its farm were descendants of imported stock, and John Lowell, chairman of the Brighton Agricultural Society in 1826, believed that the foreign stock contributed greatly to the improvement of native cattle. Lowell was convinced that within ten years no one would doubt this fact.¹⁰⁸ Levi Lincoln of Massachusetts also supported Powel's position that improved Shorthorns surpassed in every respect the best natives.¹⁰⁹

The opinion that none of the imported breeds—Shorthorn, Devon, Hereford, or Alderney—especially fitted the needs of New England dairies persisted for many years. Writers at times contended that the establishment of a dairy breed remained yet to be achieved.¹¹⁰ Henry Colman, the eminent agricultural reporter of Massachusetts, advocated selecting the better natives for dairy cattle and expressed doubts that the imported breeds were superior to them for milking and that the thin pastures of New England would support Shorthorns. He thought the native New England cattle, largely originating from Devons, offered as good possibilities as any.¹¹¹

¹⁰⁷ *Ibid.*, 7:81-82, 105-107 (June 3, 24, 1825).

¹⁰⁸ *Ibid.*, 7:193 (Sept. 9, 1825), 8:275-276 (Nov. 17, 1826).

¹⁰⁹ *Ibid.*, 7:129-130 (July 15, 1825).

¹¹⁰ *Farmers' Register*, 1:79-80 (July 1833).

¹¹¹ *Ibid.*, 6:98-99 (May 1838).

¹⁰⁶ Thompson, *A History of Livestock Raising*, 133.

¹⁰⁵ *American Farmer*, 4:55 (May 10, 1822).

Other writers, however, who traveled over New England and New York inspecting the different grades of cattle, took strong exception to Colman's view, maintaining that the Shorthorns improved the milking as well as the beef qualities of all cattle with which they were crossed. Lewis F. Allen thought New Englanders liked the natives and Devons merely because their solid red color made it easy to match them in ox teams. New Englanders also believed the varied color of Shorthorns indicated that they had resulted from a mixture of various European stock and would soon degenerate.¹¹²

The frequent preference for Devons in New England and the South resulted from a quite common belief that they could produce more beef and milk on scanty pastures and light feed than could Shorthorns. Some of the earliest advocates of Shorthorn importation adopted this view in the late thirties and early forties. Among this group were C. N. Bement, John Stuart Skinner, and A. B. Allen. The alleged inability of Shorthorns to fare well on poor pastures also became the strongest arguing point of the Hereford breeders.¹¹³ Other stockmen, however, with just as much experience, strongly defended the ability of Shorthorns to hold their own without excessive attention or pampering.¹¹⁴

Possibly the greatest hindrance to the rapid dissemination of good breeds of livestock was the exceedingly high prices at which the imported cattle often sold and the exaggerated claims of some of the dealers in purebred cattle. A writer in the *Cultivator* in 1841 warned livestock breeders against speculation. He stated that importing cattle and hogs at enormous prices had grown into a violent passion which pervaded the whole country, and he was afraid that it would soon reach a stage comparable to the Merino mania of a quarter of a century earlier. Even Jesse Buel, editor of the *Cultivator* until 1840 and a strong advocate of livestock improvement, protested when some Shorthorn cows and bulls were sold in

Kentucky for from \$1,300 to \$2,000 each.¹¹⁵ John J. Thomas, a frequent writer for the *Genesee Farmer*, denied that the high prices constituted proof of a false estimate of their value. He thought their value could only be determined over a long period of time and in terms of their increasing the value of the common stock of American cattle.¹¹⁶

These fabulous prices seldom existed outside of Kentucky and Ohio, and even there they probably had more than a speculative basis. In describing the situation in Kentucky, a writer explained that a purebred bull, costing the average price of \$500, would soon pay for himself. The bull could produce fifty calves in a year, and these half-Shorthorn calves would be worth at least \$10 a head more than common calves as 2-year-olds for fattening purposes alone.¹¹⁷ Lewis F. Allen gave credence to this statement when he declared that his half-blood Shorthorn calves were about the size of common yearlings at less than half the age.¹¹⁸

Taken all in all, the rivalry of the different breeders, the exaggerated claims, and even the mild speculations probably hastened the introduction of improved breeds and materially improved the quality of American cattle, both for beef and milk production. Without unity of action or a definite goal, it is to be expected that there would be much lost effort connected with any such enterprise. That a striking improvement in the cattle of the Eastern States had occurred before 1850 is amply affirmed by contemporary observers. At East Windsor, Connecticut, in 1839, 90 head of pure and mixed breeds of excellent cattle were assembled for a public weighing on three days' notice.¹¹⁹ The president of the Agricultural Society of Maryland in 1841 believed that the importation of new breeds from England and crossings with the common stock had completely altered the average stock of the United States. The cattle and sheep on his farm averaged twice their weight of forty years before and the meat was of a much higher quality. He quoted studies made at the major markets which indicated

¹¹² *Ibid.*, 9:367-372 (June 1841); *Genesee Farmer*, 3:404-406 (Dec. 21, 1833).

¹¹³ *Farmers' Register*, 4:571-572 (January 1837), 8:217-219 (April 1840); *Genesee Farmer*, 9:194, 284 (June 22, Sept. 7, 1839); *Cultivator*, 7:125, 192-196 (August, December 1840).

¹¹⁴ *Genesee Farmer*, 3:69-70 (Mar. 2, 1833), 9:357 (Nov. 9, 1839).

¹¹⁵ *Cultivator*, 5:187 (January 1839), 8:150 (September 1841).

¹¹⁶ *Ibid.*, 6:199 (December 1839); *Genesee Farmer*, 9:113 (Apr. 15, 1839).

¹¹⁷ *Farmers' Register*, 6:285 (August 1838).

¹¹⁸ *Genesee Farmer*, 5:255 (Aug. 8, 1835).

¹¹⁹ *Ibid.*, 9:377 (Nov. 16, 1839).

that the weight of all types of livestock had increased from 12 to 20 percent during the previous twenty years.¹²⁰ In 1849, Thomas B. Campbell of Chautauqua County, New York, stated that the common cattle of his county were "generally of the Short Horned descent."¹²¹ The same year it was attested that the Ayrshires were becoming highly esteemed by the Massachusetts dairy farmers because of their ability to adapt themselves to that region.¹²²

After an inspection trip to England and two

¹²⁰ *Cultivator*, 8:184 (November 1841).

¹²¹ *Ibid.*, n.s., 6:189 (June 1849).

¹²² *Ibid.*, n.s., 6:140-141 (May 1849).

excursions through New York, Kentucky, and Ohio, in 1841 and 1842, A. B. Allen concluded that, except for special purposes, the word "imported" should no longer be the fashion among American breeders. In most instances, British stock was no better than American. The farmers needed to become better informed concerning the animals best suited to the soil, food, and climate of each section of the country.¹²³ Perhaps Allen overestimated the quality of American cattle, but at least Americans had become acquainted with most of the modern breeds and their main characteristics were well known.

¹²³ *Farmers' Register*, 10:79-81 (February 1842).

THE EARLY HISTORY OF CEREAL SEED TREATMENT IN ENGLAND

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The treatment of cereal seed with various substances prior to sowing long antedates any conception of the nature of plant diseases or conscious attempts at their control. The origin of the practice is, no doubt, to be sought in the animistic ideas which appear to have been widespread among primitive peoples and which, indeed, appear to color the thoughts and phraseology of farmers to this day. Belief in the existence of corn and earth spirits led naturally to attempts to nourish, influence, and control them, amounting in many instances to human and animal sacrifices. In a few instances the blood and ashes of the sacrifice are known to have been applied directly to the seed corn. J. G. Frazer cited the sacrifice of a young Sioux girl by the Pawnees as late as 1837 or 1838 and the sprinkling of her blood over seed maize to ensure a plentiful crop.¹ From nineteenth-century India instances are also on record of the mixing of ashes of sacrificed children with corn to preserve it from insects.²

A more materialistic train of thought led many early agriculturalists to endeavor to increase the yield of their crops by applying chemical stimulants

to the seed in addition to manures to the soil. This idea seems to have originated quite independently of any attempt at the prevention of disease. Columella and Pliny recommended steeping seed corn in a decoction of cypress leaves or water and urine, and Virgil, freely cited by post-Renaissance agricultural writers such as John Worlidge and Matthew Peters,³ mentioned the use in his day of niter:

Some have I seen their seeds, to sow, prepare
With nitre and oil lees, for they by care
Will grow far greater, and be sooner ripe.

Whether such practices survived the fall of the Western Empire and persisted among the agriculturalists of Western Europe throughout the Dark Ages and the Medieval Period is not known to us. Probably they did, at least in southern Europe. In view of the reverence of Renaissance and later writers for classical authority, however, the importance of such a casual allusion as that from the *Georgics* quoted above cannot be overestimated. On the other hand, from the writings of Olivier

¹ J. G. Frazer, *The Golden Bough* (ed. 3, London, 1912), 1:238.

² *Ibid.*, 1:249.

³ John Worlidge, *Systema Agriculturae* (London, 1669), 55; Matthew Peters, *Winter Riches* (London, 1771), 134.

de Serres,⁴ we see how easily and naturally the use of steepes could have been reintroduced even without an inspiration from classical sources. After describing the value of change of cereal seed and the importance of careful selection of seed corn, he advocated throwing the latter into water and skimming off for rejection all the light grains that floated. The sound grain which sank should be sown while still damp as it would then sprout more quickly "évitant par là, le danger d'estre rōgee au champ par les bestioles sous-terraines." He then described the additional advantages to be derived from adding manure to the water.

Voici un autre artifice pour faire profiter plus que de l'ordinaire la semence jettee en terre; dont l'invétion est d'autant plus subtile, que la preuve l'a autorisee. Le bled destiné pour semence, soit froment, segle ou orge, sera mis tremper durant vingt-quatre heures dans l'eau engraissee avec le meilleur fumier que pourrés treuver: & la façon de l'engresser est telle, Aiés un grand cuvier, & d'icelui remplissés environ les deux tiers, de ce fumier-là; en après achevés de remplir vostre cuvier, d'eau de riviere, laquelle y laisserés sejourner environ deux jours; & puis en sortirés le fumier, qui par ce moien, aura laissé toute sa force & vertu dans ceste eau ainsi engraissee, pour la communiquer à la semence que mettrés tremper dans icelle. mais faut observer, que sortant de ceste eau la semēce qui y aura esté mise, la faut faire secher à l'ombre; & dés aussi tost que sera seche, la semer, sans attēdre que par trop se dessecher elle perde sa vertu nouvellement recevë. Par ce moien, la semence ainsi preparee, rendra avec esbahissemēt dix-huict ou vingt pour un. Si en l'annee suivāte desirés avoir sur le mesme bled, une telle multiplication, vous faudra pratiquer ce mesme remede. car ceste vertu du fumier, ne s'estēd plus loin que d'une annee.

That inveterate experimenter Francis Bacon made experiments along similar lines.⁵ It will be noted that all the stress in his work is laid on vigor and rate of growth. There is no idea of preventing disease or degeneration of the plants.

There was sowne in a *Bed*, *Turnip-Seed*, *Radish-Seed*, *Wheate*, *Cucumber-Seed*, and *Pease*. The *Bed* we call a *Hot-Bed*, and the Manner of it is this. There was taken *Horse-dung*, old, and well rotted; This was laid upon a *Banke*, halfe a foot high, & supported round

⁴ Olivier de Serres, *Le theatre d'agriculture et mesnage des champs* (Paris, 1600), 104-105.

⁵ Francis Bacon, *Sylva Sylvarum: or a Naturall Historie* (ed. 2, London, 1628), 105-106.

about with Planks; And upon the Top was cast Sifted Earth, some two Fingers deep; And then the *Seed* sprinkled upon it, having beene steeped all night in *Water Mixed with Cow-dung*. The *Turnip-Seed*, and the *Wheat* came up halfe an Inch above Ground, within two daies after, without any Watring. The Rest the third day. The *Experiment* was made in *October*; And (it may be) in the *Spring*, the *Accelerating* would have beene the speedier. This is a Noble *Experiment*; For without this helpe, they would have beene foure times as long in comming up. But there doth not occur to me, at this present, any use thereof, for profit; Except it should be for Sowing of *Pease*; which have their Price very much increased, by the early Comming. It may be tried also with *Cherries*, *Straw-berries*, and other Fruit, which are dearest, when they come early.

There was *Wheat* steeped in *Water* mixed with *Cow-dung*; Other in *Water* mixed with *Horse-dung*; Other in *Water* mixed with *Pigeon-dung*; Other in *Urine of Man*; Other in *Water* mixed with *Chalke* powdered; Other in *Water* mixed with *Soot*; Other in *Water* mixed with *Ashes*; Other in *Water* mixed with *Bay-Salt*; Other in *Claret Wine*; Other in *Malmsey*; Other in *Spirit of Wine*. The Proportion of the Mixture was, a fourth Part of the Ingredients to the *Water*; Save that there was not of the *Salt* above an eighth Part. The *Urine*, and *Wines*, and *Spirit of Wine*, were Simple without Mixture of *Water*. The Time of the Steeping was twelve heures. The Time of the Yeere *October*. There was also other *Wheat* sowne *unsteeped*, but *watred* twice a day with *Warme water*. There was also other *Wheat* sowne *Simple* to compare it with the rest. The Event was; That those that were in the Mixture of *Dung*, and *Urine*, and *Soot*, *Chalke*, *Ashes*, and *Salt*, came up within six daies; And those that afterwards proved the Highest, Thickest, and most Lustie, were; First the *Urine*; And then the *Dungs*; Next the *Chalke*; Next the *Soot*; Next the *Ashes*; Next the *Salt*; Next the *Wheat Simple* of it selfe, *unsteeped*, and *unwatered*; Next the *Watered* twice a day with warme water; Next the *Claret Wine*. So that these three last were slower than the ordinary *Wheat* of it selfe; And this *Culture* did rather retard, than advance. As for those that were steeped in *Malmsey*, and *Spirit of Wine*, they came not up at all. This is a Rich *Experiment* for Profit: For the most of the Steepings are Cheape Things; And the Goodnesse of the Crop is a great Matter of Gaine; If the Goodnesse of the Crop answer the Earlinesse of the Comming up: As it is like it will; Both being from the vigour of the *Seed*; Which also partly appeared in the Former *Experiments*, as hath beene said. This *Experiment* would be tried in other *Graines*, *Seeds*, and *Kernels*; For it may be some *Steeping* will agree best with some *Seeds*. It would be tried also with *Roots* steeped as before, but for longer time. It would be tried also in *Severall Seasons* of the Yeere, especially the *Spring*.

Brining and Liming. One of the most common methods of treating seeds was steeping in brine and then liming. When the idea originated that this process would prevent smut or bunt is not clear. Jethro Tull claimed that brining seed wheat to prevent smut was first introduced about 1660 (his book is dated 1733 and says 70 years previously).⁶ According to his account a vessel carrying a cargo of wheat sank near Bristol, and the grain being unfit for bread was removed at ebb tide and purchased by many farmers and sown in different places. At the following harvest all the wheat in England was smutty, except that grown from the seed which had been accidentally brined. This accident, Tull remarked, was sufficient "to justify the Practice of Brining ever since in all the adjacent Parts, and in most Places in *England*." He emphasized that pure salt must be used and that it should be free from brine of meat as the grease would prevent the wheat being dry enough to sow. Tull suggested changing the seed as an alternative to steeping the grain to prevent smut and remarked: "This gives a Suspicion, that our drowned Wheat at *Bristol* might possibly be Foreign, and then might not have been Smutty the next year, tho' it had not been soak'd in the Sea-Water."

In Tull's view smuttness was an inherited quality of the seed.⁷ "The Grains, or Seeds of *Vegetables*, are their Eggs, and the *Individual Plants*, immediately proceeding from them, have not only the Virtues they received in Embryo (or rather in *Plantulis*) but the *Diseases* also; for when smutty Wheat is sown, unless the Year prove very favourable, the Crop will be Smutty; which is an evident Token of *Mala Stamina*." Presumably he conceived the purpose of the salt to be to strengthen the grain and give it the stamina to resist the ill effects of the British climate for he said: "'tis a Disease of Wheat, which I don't know is usual any where but in cold Northern Countries. . . . I take it to be caused by cold wet Summers. . . ." In his view it is healthy grain which should be treated to receive this invigoration, for "Smutty Seed-wheat, tho' Brined, will produce a Smutty Crop, unless the Year prove very favourable."

⁶ Jethro Tull, *The Horse-hoing Husbandry* (London, 1733), 65-67.

⁷ *Ibid.*, 115.

Samuel Hartlib, writing on this point,⁸ remarked: "the sowing of the same seed oft on the same field, causeth *Smuttnesse*; because that *nitrous juice*, which is convenient for the nourishment of the Graine, hath been exhausted in the precedent years; and therefore it is excellent *Husbandry* every year to change the *species* of Graine, and also to buy your Seed-Corne, from places farre distant." Incidentally Hartlib stated as regards the occurrence of smut in France: "A learned Author saith, that *Smuttnesse* of corne, which maketh it smell like a *Red Herring*, was not knowne in *France*, till about 1530. . . ." William Blith, however, was recommending various steepes, including brine, for preventing "blasting" of wheat in the Chiltern country as early as 1652.⁹

Tull's account of the origin of brining must, in fact, be regarded as suspect. In Worlidge's *Systema Agriculturae*,¹⁰ we find the following statement:

Nevertheless common *Sea-salt* hath been much cried up by some for an Improver of the Seed, and an Example produced of a silly Swain, who passing over an Arm of the Sea with his Seed-corn in a Sack, which by mischance at his landing fell into the water, and so his Corn being left there till the next low water, became somewhat brackish, yet (out of necessity) did the man bestow the same Wheat upon his ploughed Grounds, and at the Harvest he reaped a Crop of good Wheat, such as in that year not any of his Neighbors had the like.

There is no mention here of smut though it is perhaps implied by the emphasis on harvesting "good" wheat, but this is evidently an earlier version of Tull's story before the sack of corn had swollen into a shipload and the one field sown with it to many. Ten years earlier Adolphus Speed observed that brining and liming wheat and barley and mixing with clover seed enriched the soil and prevented smut.¹¹ Moreover, brining was already known in England in the sixteenth century. Hugh Plat mentioned a "western gentleman" who steeped his barley in sea water

⁸ Samuel Hartlib, *His Legacie* (London, 1651), 13, 15.

⁹ Walter Blith, *The English Improver Improved* (London, 1652), 128.

¹⁰ Worlidge, *Systema Agriculturae*, 56-57.

¹¹ Adolphus Speed, *Adam out of Eden* (London, 1659), 104-105.

two years running and then sowed it in 1595 and 1596 and had very plentiful crops.¹²

Worldidge was not a great believer in common salt, and from his writings we get another indication of the philosophical ideas behind the use of steeps in the period before the conception of diseases caused by external agents became established. He said:

That which containeth in it most of the *Universal Subject* or *Matter of Vegetables*... is the fittest for this purpose; of all which, *Nitre* or *Sal terrae* is esteemed the best, wherewith *Virgil* adviseth to infuse or besprinkle the Seed...

This also is that Subject [Johann Rudolph] Glauber so highly extols, where he says, ... *If Husbandmen did sow their Seed imbibed with this Menstruum, it would sooner be ripe, and bear better Grain, &c.* This Subject or *Menstruum* he labours in several Tracts of his... for all sorts of Vegetables, either by application thereof unto the roots, or by way of irrigation, or by imbibition of the Seed therein, as very highly conducing to Fertility and acceleration of Maturation; but in another Tract of his, being the Explication of the former, he very honestly undeceives all such that judge this *Nitre* or Subject to be common *Nitre* or *Salt-petre*... The *Nitre* or *Sal Terrae* intended by these and other Learned Authors as apt for this work, is the fixed Salt extracted out of any *Vegetable*, *Animal*, or *Mineral* thoroughly calcined, as after the burning of Land in the common way of *burn-baiting*, that which causeth so great Fertility is as well the fixed *Salt* or *Alkali* that's left in the *Ashes*, as the waste or expence of the sterile acid Spirit which before kept that vegetating Salt from acting. What is it that is fertile in Lime, *Ashes*, *Soap-ashes*, &c. but this *Nitre*, or *Sal terrae*, this *Universal Subject* left therein, and most easily separable after calcination?¹³

Glauber's methods were fully described in subsequent works,¹⁴ and they have been fully discussed and their value assessed elsewhere.¹⁵

Obviously, if seed could be infused with this

¹² Quoted in Donald McDonald, *Agricultural Writers, from Sir Waller of Henley to Arthur Young, 1200-1800* (London, 1908), 58.

¹³ Worldidge, *Systema Agriculturae*, 55. Worldidge cited Glauber, *Miraculum Mundi* (Amsterdam, 1653), and *Explicatio... Miraculum Mundi* (Amsterdam, 1656).

¹⁴ Johann Rudolph Glauber, *Arca thesauris opulenta, sive appendix generalis*... (Amsterdam, 1660), pt. 2, p. 119-123.

¹⁵ B. Wehnelt, "Johann Rudolph Glauber (1604-1670)," *Nachrichten über Schädlingsbekämpfung*, 10:1-23 (1935).

"Universal Subject" or "vegetating Salt," its vigor would be enormously increased, its yielding capacity multiplied and its tendency to disease, whether from loss of vigor or inability to withstand the malign influences of the environment, would be eliminated as a matter of course. Glauber, Worldidge, and Tull represent the materialistic philosophical thought of the day.

Blith's "unfailing remedy" to preserve corn from blasting, though not strictly relevant to seed treatment, is worth quoting as representing the opposite standpoint.

For Blasting is one of a Kingdome Curses, And therefore to Prescribe naturall, absolute, unfailing Remedies in all Places, and at all Times, is beyond my skill, yet one Unfailing Remedy there is, as to the Removall of this, so it is the Removall of all Causes or Occasions of Barrennesse whatever; And that is sinne, the Root that brings forth all: First brought forth the Curse, and ever since the fruit thereof: The onely Cure thereof is our Lord Jesus set upon the Pole, he must damne the Curse for us, and in us; and wee by looking up to him, and our Application of himselfe to us, Mourning over him, and humbling our Soules before him; Hereby must wee bee made Sensible of the Removall hereof, by which, and by no other meanes it is Removable.¹⁶

It is interesting to find that even in these early days people contracted to treat the farmer's seed. An instance is recorded in a letter sent to Richard Bradley in 1721. Its contents were as follows:

A Sort of a Chymist came down to these Parts some Years ago, to teach us a Dressing for Corn, by the Way of Brining; which applied to Wheat, or Barley, would, as he said, make the poorest Ground bear a Crop continually, and so rank, as that a Peck of Wheat less, *per* Bushel, would sow an Acre. Which some Gentlemen in this Neighbourhood tried, with Success, for Two Years; but the Undertaker came into these Parts no more, and, by what I find, he could not afford to Dress the Corn any longer at that Price, which was but Ten Shillings *per* Acre; whereas, had he demanded Twenty, those who have large Farms, with much light Ground, would have been glad of such a Dressing, for those Grounds which lay at such a Distance, that the very carrying out their Dung thither, would have stood them in as much.¹⁷

In answering the letter Bradley hinted that 20 shillings per acre would more than pay for the brining.

¹⁶ Blith, *The English Improver Improved*, 127.

¹⁷ Richard Bradley, *A General Treatise of Husbandry and Gardening* (London, 1724), 3:77-78.

Arthur Young, in his *Annals of Agriculture*, recorded an experiment by John Ellman of Glynd, Sussex, who kept the brine from his salted meat tubs for steeping his wheat seed.¹⁸ When the time for steeping arrived, he found that the quantity would not be sufficient so he ordered the chamber lye of the family to be added, the seed being steeped in two lots for periods of 1 hour and 7 hours respectively. The result of this treatment was the complete failure to germinate through 13 acres, and Ellman remarked: "As brine is common for this use, and chamber-lye alone also, in some places, it deserves attention how mixing the two together should have this effect." When half the quantity of dung water was added the crop grew well, and he suggested that the failure was due to the strength of the combined brine and urine destroying the vegetative power of the seed. Francis Forbes,¹⁹ in recommending brining and liming, stressed that the land should be moist when the seed is sown, as steeping for hours causes the seed to absorb moisture and swell. Otherwise sowing in a dry soil results in the vegetation being checked and the seed is either weakened or dies. He recommended brisk stirring of the seed, which should be sown as soon as dry.

William Marshall claimed that all seed would become smut infected unless it was properly treated. If the seed became "as black as smut" or "brand," a cure could be effected in three years by the following method. "Instead of dissolving the salt in a large proportion of water . . . it is dissolved in a very small quantity of water;—barely enough to bring on the solution. With this *liquid salt* the lime is slaked; and with this saline preparation, in its *hottest* state, the wheat is candied; having previously been moistened, for the purpose, with pure water."²⁰ He claimed that steeped seed was freer from smut than untreated. John Houghton reported that during brining and liming the light corn came to the top and that at harvest the light corn grown on the headland had scarcely one ear in ten that was not smutty, the weighty corn being free from smut.²¹

¹⁸ *Annals of Agriculture*, 32:192–194 (Bury St. Edmund's, 1799).

¹⁹ Francis Forbes, *The Extensive Practice of the New Husbandry* (London, 1778), 271.

²⁰ William Marshall, *The Rural Economy of Norfolk* (London, 1787), 1:218–219.

²¹ John Houghton, *Husbandry and Trade Improved* . . . revised by Richard Bradley (London, 1728), 4:50.

He concluded that "if seed had the lighter part separated from it, it would prove a better prevention of *smut* than any other way yet found out." This was supported by Alexander Hunter.²² Young, however, concluded that swimming the seed in brine and liming appeared to be "utterly deficient."²³ Duhamel du Monceau, summarizing Tillet's experiments,²⁴ recommended a strong brine of sea salt but stated that one part of niter to nine parts of water was more efficacious. In the "Letters and Papers on Agriculture, Planting, &c." of the Bath and West of England Society,²⁵ a Mr. James Jennings of Harlington reported that in all his experiments brine seemed to injure the plants throughout the whole of their development. Drenching seed in salt and water, soap-les, quicklime, etc., was considered by the Reverend Henry Bryant, after conducting field and garden experiments, not only to be ineffectual as a means of controlling the distemper in wheat known as brand but also destructive to the seed.²⁶

Urine and Dung. According to Peters,²⁷ urine was recommended by Columella and Pliny, but, as in the case of some of the other steeps, opinion was divided on its value. Tull stated that if seed wheat is soaked in urine it will not grow, and, if only sprinkled, most of the seed will die unless sown quickly.²⁸ Thomas Hale recorded that urine was tolerably successful, but in his trials he found that it destroyed the vegetative capacity of the seeds.²⁹ He observed that the strength of the urine may vary according to the diet. Young also reported the failure of a crop when urine was mixed with brine.³⁰ In contrast

²² Alexander Hunter, *Georgical Essays* (York, 1777), 51.

²³ Arthur Young, *The Farmer's Calendar* (ed. 8, London, 1809), 473.

²⁴ [Henri Louis] Duhamel du Monceau, *The Elements of Agriculture*, translated and revised by Philip Miller (London, 1764), 1:294–295. The original French edition was published at Paris in 1763.

²⁵ "Account of a Series of Experiments, Respecting Smut in Wheat," Bath and West of England Society, *Letters and Papers on Agriculture, Planting, &c.*, 9:97–103 (Bath, 1799).

²⁶ Henry Bryant, *A Particular Enquiry into the Causes of That Disease in Wheat, Commonly Called Brand* (Norwich, 1783).

²⁷ Peters, *Winter Riches*, 133.

²⁸ Tull, *The Horse-hoing Husbandry*, 66.

²⁹ Thomas Hale, *A Compleat Body of Husbandry* (ed. 2, London, 1758), 2:353.

³⁰ *Annals of Agriculture*, 32:193 (1799).

to these views Marshall,³¹ quoting from Duncumb's *Hereford*, mentioned a process in which wheat was steeped in urine or strong brine, repeatedly stirred and the light grains skimmed off, and after one night's soaking thinly spread on a floor and powdered over with sifted lime and put into sacks for use. As a farmer in question held the view that steeping was of the utmost importance, it is presumed that he had faith in the above method although no results are given. Duhamel du Monceau, writing of Tillet's experiments,³² recommended the use of saltwort, potash, ashes of tartar, and lye of common ashes much impregnated with salt, human urine or cow's urine "alkalised by putrefaction." Another advocate of the use of urine, Robert Brown, wrote: "Stale urine may be considered as the safest and surest pickle; and, where it can be obtained in a sufficient quantity, is commonly resorted to. The mode of using it does not, however, seem to be agreed upon; for, while one party contends that the grain ought to be steeped in the urine, another party considers it as sufficient to sprinkle the urine upon it."³³ Brown also agreed with the opinions of earlier writers that seed soaked in urine will lose its vegetative capacity if not sown immediately, but in contrast to Tull, he was not so pessimistic as to the practice of sprinkling the seed with urine and stated that this method seemed to be the safest if performed by an attentive hand. Early theorists were much more optimistic of the value of manurial steepes. Plat in 1600 knew of "a Gentleman, at this present dwelling in Cornwall, who being very industrious, and searching into the workes of Nature, would needes attempt the sowing of Wheate in his Arable groundes, beeing of such kind, Nature and quality, as was meerey repugnant and unfit for that Grain, as the experience of the greatest part of the Countrey round about him did manifestly declare. And this he performed onely by infusing his Seed Corne foure and twenty houres in a strong liquor, that had descended from his muck-heape into a recep-

tacle of bricks: but he never infused his Corne . . . till the liquor had beene of two yeares date, and he alwaies dried his corne before he sowed it."³⁴

Steeping seed in animal and bird dung, etc., was advocated by Bacon,³⁵ and Speed propounded that persons having much land should be provided with a "Moat or standing Pool" wherein might be thrown all manner of farm manure, especially rabbit dung, together with such oil, ale, perry, cider, beef broth, etc., as could be spared, and also blood, urine, and other waste.³⁶ In addition to watering the land with this potent liquid by means of an engine, "in part like that they use in London, when houses are on fire," Speed steeped corn in it for 24 hours and stated that one might expect better fertility and profit. Peters mentioned that a Monsieur Donat near Rochelle, who for seven years had never had a smut-infected ear, used a preparation consisting of 25 pounds each of quicklime and pigeon's dung, 40 pounds of wood ashes, and 25 pounds of sea salt or saltpeter. This he remarked was sufficient to prepare 12 to 13 hundredweights of wheat.³⁷ Duhamel du Monceau also mentioned a Monsieur Vandusfel who found that seed impregnated with an infusion of dung, ashes, and lime was totally exempt from smut.³⁸ Dunghill drainings and pigeon manure were also included in Young's many experiments.

Arsenic. For the first mention of the use of arsenic as a medium for treating seed, we are referred to the work of Aucante,³⁹ reported in Germany in 1755. That it was known to the British farmer shortly after this date is borne out by Hale's remark: "Several farmers put arsenic into their brine for wheat, and apprehend it beneficial; but this is a detestable practice."⁴⁰ The first edition of Hale's work (1756) does not appear to contain any mention of arsenic.

³¹ Hugh Plat, *The New and Admirable Arte of Setting of Corne* (London, 1601), D2.

³² Bacon, *Sylva Sylvarum*, 106.

³³ Speed, *Adam out of Eden*, 121-128.

³⁴ Peters, *Winter Riches*, 132-133.

³⁵ Duhamel du Monceau, *The Elements of Agriculture*, 1:237-238.

³⁶ Horace M. Woolman and Harry B. Humphrey, "Summary of Literature on Bunt, or Stinking Smut, of Wheat," U. S. Department of Agriculture, *Bulletin 1210* (Washington, 1924), 4, refers to Aucante, "Schreiben, von schädlicher Zubereitung der Getraidesaat," *Hannoversche Anzeigen, Nützliche Sammlungen*, 1755, 1194-1198.

⁴⁰ Hale, *A Compleat Body of Husbandry*, 2:348.

³¹ William Marshall, *A Review of the Reports to the Board of Agriculture; from the Western Department of England* (York, 1810), 333.

³² Duhamel du Monceau, *The Elements of Agriculture*, 1:295.

³³ Robert Brown, *A Treatise on Agriculture and Rural Affairs* (Edinburgh, 1811), 2:17-18. A. Lawson, *The Farmer's Practical Instructor* (London, 1827), 208-209, quoted Brown.

The use of arsenic in separate form and with other ingredients seems to have had a mixed reception by farmers in England and France. Duhamel du Monceau recommended as of service against *charbon* or burnt grain the washing of seed in water, limewater, brine, and arsenic "of which some persons have made such a secret" and stated that according to Tillet's experiments these views were confirmed.⁴¹ However, one of his countrymen, Abbé Tessier, held other views and was responsible for the king's council in France issuing an edict prohibiting the use of arsenic and other poisonous drugs.⁴² Tessier who conducted experiments relative to the distemper in wheat called the smut at Rambouillet "under the King's Eye," as the title of his report informs us, concluded that the use of arsenic was not only useless but also dangerous. A translation of his report appeared in 1786 in Young's *Annals of Agriculture*.⁴³ Although Duhamel du Monceau recommended the use of arsenic, he admitted that its use brought many complaints and mentioned that one physician published a paper against the use of this poisonous steep. Marshall claimed that he knew one person "whose accuracy might be safely relied on, were not his evidence corroborated by my own occasional observation," who had used arsenic with uniform success for twenty years, though not producing a crop entirely free from smut.⁴⁴ He went on to say that the danger of using arsenic was the biggest drawback against its general use but stated that he had not heard of a single accident in the district. The method of preparing the arsenic was as follows: Pound the arsenic extremely fine and boil in water, then dilute it, and drench the seed in the liquor. "The usual method of preparing the liquor is to boil one ounce of white arsenic finely powdered in a gallon of water from one to two hours, and to add to the decoction as much water or stale urine as will increase the quantity of liquor to two gallons." Though according to Marshall the professional men recommended these preparations, he himself admitted: "My own practice has not furnished me with a sufficient proof that any preparation is necessary. . . . Nevertheless, I wish

to have it understood that I am not at present an enemy to preparations." Candying the seed with lime was advocated in order to dry up the moisture and so prevent it from entering the pores of the hands of the seedsman and to render the seed more pleasant to the hand in sowing. Young also carried out experiments with various steeps, including arsenic, and concluded that steeping seed in arsenic was one of the most successful guards against smut.⁴⁵ Sinclair mentioned that arsenic was strongly objected to, not only because of the danger while attending it, but also because of its tendency to kill game birds.⁴⁶

Other Methods. Diversity was the keynote of the practices of the farmers of the last few centuries, and it is, therefore, only possible to give a few of the other concoctions used in the treatment of seed. Steeping seed in water before sowing was practiced by some farmers to promote germination, but this process did not meet with much success in preventing smut, although washing in several waters did tend to reduce the amount of infection. In one of his experiments Young treated smut-infected velvet wheat in 12 different ways, including that of washing in water, and observed that three-fourths of the whole plot (the plots were a rod square) thus treated was smutty.⁴⁷ Seed sown dry from the barn was only half smutty, and the other 10 treatments resulted in from 5 to 115 infected ears per plot. However, in a further experiment, using 14 different treatments, he recorded that the seed washed only, gave 325 smut-infected ears per plot as compared with 377 smutty ears on the plot sown dry from the barn, the other treatments giving from 0 to 43 smut-infected ears per plot. In addition to the plot sown with seed dry from the barn, Young included a plot sown with white velvet wheat a year old which was very smutty and had received no treatment. This plot produced only 7 infected ears, but Young failed to mention this result, although the 3 most efficient treatments—namely steeping 24 hours in a steep of lye, arsenic, etc.; steeping 12 hours in a pickle made from hot limewater to which was added Brongniart's vegetable powder and dried with lime; and steeping for 12 hours in the first named—gave 5, 5, and 6 smutty ears respectively. Something may have happened which Young was

⁴¹ Duhamel du Monceau, *The Elements of Agriculture*, 1:292.

⁴² Young, *The Farmer's Calendar*, 473.

⁴³ *Annals of Agriculture*, 6:199-211 (1786).

⁴⁴ William Marshall, *The Rural Economy of Yorkshire* (London, 1788), 2:10-13.

⁴⁵ Young, *The Farmer's Calendar*, 469.

⁴⁶ John Sinclair, *The Code of Agriculture* (London, 1817), 341.

⁴⁷ Young, *The Farmer's Calendar*, 469-475.

unable to account for because at the time of observation he was in France and had left the experiment in charge of his bailiff and his friend and neighbor named Carter. Commenting on these experiments, Young wrote: "Every operation the seed went through did good: washing in common water lessened the smut from one half to one third."

A curious preparation was recommended by Pierre Brodin de la Jutais in a work entitled *L'Abondance, ou véritable pierre philosophale* (Paris, 1752).⁴⁸ The process was as follows: Melt niter in an iron vessel, and when it is hot enough to burn whatever is thrown in, a small quantity of the seed to be sown, e.g., wheat, turnip, etc., should be thrown in. When the seeds are burnt it is only necessary to dissolve the niter in water. Concerning the question of the effect of this operation, the author answered: "None at all; except that in this fructifying liquor there is a great deal of nitre, and some fixed nitre or alkaline salt." A Frenchman who tried this essence three times concluded it to be of no use. It was claimed that the same liquor could be made by mixing a little alkaline salt with a strong solution of niter.

The use of vitriol was strongly recommended by the James Jennings who wrote to the Bath and West of England Society.⁴⁹ He described his experiments on the control of smut in wheat and concluded that the disorder was communicated by infection, that "vitriolick acid" destroyed that infection, that the required proportion was 1 to 30, that a much greater proportion might be used with safety, and that the seed should not be allowed to dry after it is taken out of the steep but may remain in it some time without danger. In an earlier work Peters told of a preparation used by a Mr. Pluche to control smut, which consisted of the lee of lime, saltpeter, alum, verdigris (a small quantity), vitriol, common salt, and ashes of plants.⁵⁰

One interesting point in the early literature on seed treatment is the number of different ingredients that were mixed together to make these liquors. It is, indeed, a wonder that the seed ever germinated at all. In addition to Pluche's prepar-

ation mentioned above, another process by Charles Varley was as follows:

Take a tar hogshead, let it into the ground, with it's top even, with the surface in some bye place, having a cover thereon.

In this keep chamberly from one seed time to another, the older it is and the better; in this throw all the bullock, sheep, hogs, or any sort of galls you can get, the more the better.

In each hogshead full of liquor put two gallons of train-oil, a great many heads of garlick bruised, one pound of copperas, one pound of nitre, and one stone of bay-salt; steep the seed therein eight hours, and skim off all the light seed that swims at top, then take it out, and on a floor mix it with quick lime and soot, of each an equal quantity, till it be of a consistence proper for sowing.⁵¹

Varley considerably mentioned: "I might add several other pickles, but since I know the above to answer every good end of enriching the seed, preventing all sorts of vermin, and worms, grubs, flies, &c. from damaging the crop; and as the ingredients are cheap, and may be got in any country town, I think it would be in vain to perplex the farmer's ideas with any other." A method for cleaning smut-infected seed without washing was also described by Varley. It necessitated mixing the seed in very fine sand sieved on the floor to about 3 inches thick, placing about 2 inches of the grain on the top, and then threshing in the same manner as for the removal of the awns or beards of barley. This done, it was sieved and the grain again placed on clean sand and the same process repeated. One man by this method is stated to have been able to clean 3 or 4 quarters in a day. Two other methods employed to prevent smut in wheat which did not necessitate steeping the seed are mentioned by Sinclair, namely, kiln drying the seed, and passing the seed loosely through mill stones.⁵² The latter was practiced at Wooller in Northumberland.

Wheat was not the only seed to be treated in order to promote germination and prevent diseases and pests. Peters, who apparently felt deeply on the subject,⁵³ wrote as follows: "Shall I stand alone convicted by all mankind, stand a culprit before my great superiors, when I affirm the great

⁴⁸ Duhamel du Monceau, *The Elements of Agriculture*, 1:234-235.

⁴⁹ "Account of a Series of Experiments, Respecting Smut in Wheat," Bath and West of England Society, *Letters and Papers on Agriculture, Planting, &c.*, 9:97-103 (Bath, 1799).

⁵⁰ Peters, *Winter Riches*, 133.

⁵¹ Charles Varley, *A New System of Husbandry* (York, 1770), 1:179-184.

⁵² Sinclair, *The Code of Agriculture*, 341.

⁵³ Peters, *Winter Riches*, 137.

omission, in not reminding the farmer, that it is absolutely as necessary for him to take the same precaution, care, and assiduity, through every species of grain he commits to the benevolent earth, as to wheat," and concluded, "is it because they are not of equal value—too vague a word to answer? Let me therefore recommend that duty (you owe to yourselves) as much to one, as the other; they are all fed with the same food, and nourished in the same earthy bowels; they are no bastards in the parent womb, but imprudently made so by an unmeaning custom." Bacon, writing nearly a century and half earlier, carried out experiments on steeping various seeds to promote germination and also recommended the treatment of other "*Graines, Seeds, and Kernels*."⁴⁴ Another advocate for this general steeping was Sinclair, who recommended the steeping of all varieties of seed in order to obtain a quicker and more uniform growth.⁴⁵

To prevent smut in barley it was a practice to run the seed through flaming straw before sowing.⁴⁶ Marshall wrote of barley: "I never met with an instance either of fortifying it against disease, or of steeping it to forward its vegetation in a dry season, or a backward seed-time. This is strong evidence, though not a proof, that steeping seed-barley with intent to promote its vegetation, has no beneficial effect."⁴⁷ However, writing 12 years later,⁴⁸ he stated: "May 2. Last night, put four bushels of barley, into two sacks, and immersed them in the dung water, in the farm yard. This morning, *dried* the seed, with wood ashes, and sowed it. . . . The water swelled it out, considerably; and perhaps, this dry weather, it will vegetate quicker, than the seed sown dry. June, 1775. The steeped has no apparent preference to that sown dry,—*in this experiment*." Young mentioned that during a droughty season steeping of barley and oats had been tried with success,⁴⁹ and Loudon said that barley sown late was sometimes steeped in common water but seldom pickled or otherwise

prepared.⁵⁰ Young did, however, carry out experiments to discover whether steeping barley in salt, lime, bullock's blood, dunghill drainings, urine, saltpeter, pigeon's dung, and wood ashes had any effect on the crop yield and remarked: "I do not at present recollect any writer that recommends them for barley; however, I thought it no impropriety to try their efficacy, that the truth might be known; lest some future theorist might arise to promise mountains of gold from the use of nostrums."⁵¹ At the conclusion of three sets of experiments carried out during the years 1765–1767, he stated that steeping had no effect on barley. Although this view seems to be fairly general, it is interesting to refer back to the statement in the work of Sir Hugh Plat of a western gentleman who steeped his seed for two successive years with success.

Pretreatment of carrot seed was practiced by a Norfolk farmer named Robert Burrows in order to bring it to the point of vegetating before sowing and thus enable the plant to compete against the numerous quick growing weeds.⁵² The method was as follows:

Having weighed the quantity of seed to be sown and collected sand or fine mould, in the proportion of about 2 bushels to an acre, I mix the seed with the sand or mould, 8 or 10 lbs to every 2 bushels, and this is done about a fortnight or three weeks before the time I intend sowing; taking care to have the heaps turned over every day, sprinkling the outside of them with water each time of turning over, that every part of the sand heaps may be equally moist, and that vegetation may take place alike throughout. I have great advantage in preparing the seed so long beforehand; it is by this means in a state of forward vegetation, therefore lies but a short time in the ground, and by quickly appearing above ground, is more able to contend with those numerous tribes of weeds in the soil, whose weeds are of quicker vegetation.

A similar practice is described by E. V. B. Crude, the French translator of Thae's work and quoted by Loudon in which "*sciure* (night soil) instead of earth, and waters with the drainings of dunghills"

⁴⁴ Bacon, *Sylva Sylvarum*, 106.

⁴⁵ Sinclair, *The Code of Agriculture*, 343.

⁴⁶ Woolman and Humphrey, "Summary of Literature on Bunt . . .," 3.

⁴⁷ Marshall, *The Rural Economy of Norfolk*, 239.

⁴⁸ William Marshall, *Minutes, Experiments, Observations, and General Remarks, on Agriculture, in the Southern Counties* (London, 1799), 1:117.

⁴⁹ Young, *The Farmer's Calendar*, 202.

⁵⁰ John Claudius Loudon, *An Encyclopaedia of Agriculture* (London, 1825), 758.

⁵¹ Arthur Young, *A Course of Experimental Agriculture* (Dublin, 1771), 2:121–123.

⁵² Robert Burrows, "On the Cultivation of Carrots," *Communications to the Board of Agriculture*, 7(1):70–92 (London, 1811).

was used.⁶³ Steeping of late sown peas was also advocated by Loudon.⁶⁴

Various processes for fortifying the seed against attack by birds, insects, vermin, and worms were advocated from time to time. Bacon stated: "Though *Graine*, that toucheth *Oile*, or *Fat*, receiveth hurt, yet the *Steeping* of it, in the *Dregs* of *Oile*, when it beginneth to Putrifie, (which they call *Amurca*,) is thought to assure it against *Wormes*."⁶⁵ Other recommendations come from Hartlib who inferred that liming grain until it "be as big as a small *Pease*" is a good protection against smut and attack by birds and worms,⁶⁶ while Blith advocated liming and mixing with ashes to avoid attacks from birds and vermin.⁶⁷ A process adopted by the Indians in America for protecting their maize against molestation by crows and other birds is recorded by James Adam. "Take the roots of swamp hellebore, known also by several names of skunk cabbage, tickle weed and bear's foot; boil them in so much water as to keep them covered an inch deep; by two hours boiling, the liquor will be of sufficient strength."⁶⁸ The seed was then steeped for 20 hours.

Steeping turnip seed in sulphur for 24 hours to prevent attack from fly was mentioned by Peters,⁶⁹ but Marshall reported results of experiments carried out with sulphur and soot had not been such as to establish the practice.⁷⁰ Preparation of turnip seed in drainings from dunghills had no effect on fly infestation according to Loudon.⁷¹

In Switzerland it was the custom to steep clover seed in water or oil and then mix it with powdered gypsum as a safeguard against attack by insects.⁷²

With the waning of the theory that the seed needed a stimulus to fortify it against disease and the introduction of the new theory regarding the

infective nature of smuts, copper sulphate was introduced as a preventive measure. Although this was mentioned by Schulthess in 1761,⁷³ it was nearly half a century before its effectiveness was clearly demonstrated by Prévost in 1807 and a method worked out for its application on a field scale.⁷⁴

A sketch of the advances made in seed treatment from the advent of the use of copper sulphate to the modern use of mercuric dusts has been given by Hubert Martin, to which the reader is referred for the history of seed treatment in the nineteenth and twentieth centuries.⁷⁵

Discussion. It is hard to judge the value of most of the treatments described in the foregoing pages. Each author was enthusiastic about the effects of his favorite specific treatment, but very seldom were any adequately controlled experiments reported on which an impartial judgment could be based. Assessment of their value is rendered more difficult by the vagueness regarding the purpose intended to be served by most steeps. Mere immersion in water and removal of loose spores and bunt balls by flotation was perhaps beneficial with wheat. Some idea of the fungicidal value of many of the solutions popular in the eighteenth century can be derived from the careful experiments of Tillet.⁷⁶ He, for the first time, rejecting all earlier conjectures about the production of bunt by environmental factors and loss of vigor in the plant, demonstrated:

⁷⁴ Bénédict Prévost, *Mémoire sur la cause immédiate de la carie ou charbon des blés, et de plusieurs autres maladies des plantes, et sur les preservatifs de la carie* (Paris, 1807); translated from the French by George Wannamaker Keitt under the title, *Memoir on the Immediate Cause of Bunt or Smut of Wheat, and of Several Other Diseases of Plants, and on Preventives of Bunt*, and issued by the American Phytopathological Society as *Phytopathological Classics No. 6* (Menasha, Wis., 1939).

⁷⁵ Hubert Martin, *The Scientific Principles of Plant Protection* (ed. 3, London, 1940), 258-275.

⁷⁶ Mathieu Tillet, *Dissertation sur la cause qui corrompt et noircit les grains de bled dans les épis; et sur les moyens de prevenir ces accidens* (Bordeaux, 1755); translated from the French by Harry Baker Humphrey under the title, *Dissertation on the Cause of the Corruption and Smutting of the Kernels of Wheat in the Head and on the Means of Preventing these Untoward Circumstances*, and issued by the American Phytopathological Society as *Phytopathological Classics No. 5* (Ithaca, N. Y., 1937).

⁶³ Loudon, *An Encyclopaedia of Agriculture*, 795.

⁶⁴ *Ibid.*, 766.

⁶⁵ Bacon, *Sylva Sylvarum*, 164.

⁶⁶ Hartlib, *His Legacie*, 16.

⁶⁷ Blith, *The English Improver Improved*, 129.

⁶⁸ James Adam, *Practical Essays on Agriculture* (London, 1789), 1:237.

⁶⁹ Matthew Peters, *The Rational Farmer* (ed. 2, London, 1771), 75.

⁷⁰ Marshall, *The Rural Economy of Norfolk*, 265.

⁷¹ Loudon, *An Encyclopaedia of Agriculture*, 788.

⁷² *Ibid.*, 802.

⁷³ Hans Heinrich Schulthess, "Vorschlag einiger durch die Erfahrung bewährter Hilfsmittel gegen den Brand im Korn," *Naturforschende Gesellschaft in Zürich, Abhandlungen*, 1:497-506 (Zürich, 1761).

That the common cause, the abounding source of bunted wheat plants resides in the dust of the bunt balls of diseased wheat; that the clean healthy seed, inoculated with this dust, receives through rapid contagion and a very intimate communication the poison peculiar to it; that it transmits the poison to the kernels of which it is the origin; that these kernels once infested become converted into a black dust and become for others a cause of disease; that the culms, themselves, that bore the bunt heads contain something pestilential for the seed that lies near them and on which they germinate . . . that the treatments I employed have protected the most heavily infected seed against the effects of the contagion, and that the success of these treatments has been so much the more positive even though the seed, on being treated, always retained the large quantity of smut with which it had been inoculated.⁷⁷

In two parallel experiments with the 1752-53 wheat crop the numbers of bunted heads were as follows: Control, seed dusted with bunt spores, 1,687 and 938; Seed similarly dusted and then treated with saltpeter and lime, 10 and 84.

The total number of ears on the control plots was 3,713 and 1,269 respectively; the total number of ears from the treated seed is not stated. It may be assumed to have been similar to that on the controls as in each experiment the two lots of seeds were sown in adjacent plots of the same size. There may, of course, have been some reduction in germination as a result of the treatment, in which case the above figures are unduly favorable to the saltpeter and lime.

That any of the steepes had a significantly favorable effect on yield seems highly improbable, as was recognized by the more critical of eighteenth-century authors. Concerning one of the steepes, Duhamel du Monceau remarked: "De Vallemont's liquor was esteemed a wonderful discovery: it was looked upon as a magnet capable of attracting from the atmosphere certain principles which probably never existed there." Claims were made that ten times the amount of the crop ob-

tained by ordinary methods might be obtained by using niter and other salts, and throughout the literature we find mention of the saving of seed corn due to increased production induced by steeping. Duhamel du Monceau further stated that "The desire the public had to find these virtues real, procured them a good reception; and experiments badly conducted propagated the error still farther." Seeds sown in kitchen gardens gave wonderful results, and Duhamel du Monceau admitted that he was also deceived by the results of such trials, but from his own trials which extended over 3 or 4 acres, he found that these increases were no longer obtained. Having seen a single grain of barley produce without any preparation 230 stalks and being informed that another grain in England had produced 150 ears he concluded that these boasted increases were to be attributed to the quality of the soil, to good tillage, and to the grains being so distant from one another as to extend their roots and collect a greater quantity of nourishment, and not to the effect of the "fructifying liquor."⁷⁸

This view is supported in the *Georgical Essays* in an article written by Hunter,⁷⁹ who also concluded "that I confine my idea of steeping to the supposed power of giving to seeds a vegetative force by means of certain *prolific* liquors which are thought to invigorate the germ, by mixing with the farinaceous part of the seed." Bryant, at the conclusion of his small treatise,⁸⁰ recommended the farmer "to lay his old, irrational practice aside; to pay particular attention to a proper culture of the soil; to keep it clean and free from weeds; and to supply it with proper manure." "These," he remarked, "are the best remedies for diseases in corn; these will contribute most to health and vigour, and make his fields, as well as himself, laugh and sing."

⁷⁸ Duhamel du Monceau, *The Elements of Agriculture*, 1:229-239.

⁷⁹ Hunter, *Georgical Essays*, 51.

⁸⁰ Bryant, *A Particular Enquiry . . .*, 57-58.

⁷⁷ *Ibid.*, 127.

AGRICULTURAL READJUSTMENT AND AGRARIAN UNREST IN ILLINOIS, 1880-1896

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The conditions that provoked the Populist revolt west of the hundredth meridian are well known. The spectacular boom of the late eighties and the heartbreaking collapse that followed the recurrence of drought there is a familiar story. So is the burden of taxes on rural real estate, the high interest rates and commission fees on loans, the heavy charges of railroad shipments to the Great Lakes or salt water, and the rapid dissipation of the public domain. These were the conditions, together with the ozone of the plains, that produced the extravagant language in which the agrarian movement phrased its grievances. Raising "hell" for a few years was at least as profitable on the dry plains as producing wheat or corn.

The situation was different in the States of the Old Northwest. Once the scene of a vigorous agrarian movement, they had long since ceased to exhibit acute symptoms of rural unrest. Its decline was the result of a confusion of objectives between the Patrons of Husbandry and the third-party movement in the late seventies and of a subsequent recovery of farm prices and land values. Simultaneously there occurred an adjustment away from the frontier economy of wheat and wool which the Civil War had helped to perpetuate in the region. This change, which was shared by Iowa and a portion of Minnesota, produced greater economic stability. In these circumstances, the discontent provoked by a subsequent period of agricultural depression was destined to be less aggravated than that of the dry belt of the western plains. Under normal circumstances it might find adequate expression within accustomed political channels rather than precipitating an extensive break in party lines.

In Illinois the decline of the Patrons of Husbandry in the late seventies was almost as remarkable as its meteoric rise had been a few years before. The independent political movement, supported by the more radical agrarian elements, lingered but a few years after the demise of the Illinois State Farmers' Association left it without or-

ganized backing.¹ Changes in terminology from a National Greenback to Greenback-Labor, Anti-Monopoly, and finally in 1884 to a "People's Party" were of no avail. In this year the independents dwindled to a scant 10,000 voters.² To all appearances the farmers' third party had entered that bourne from which no lost cause returns, leaving in its wake a shrinking band of irreconcilables.

To a considerable extent the success of the agrarian protest had proved its undoing. Discontent with the railroads had resulted in the creation of the Board of Railroad and Warehouse Commissioners. So successful were the operations of this agency that it could report in 1888 that relations between the "people of Illinois and the railroads apparently were never more amicable than at present."³ Granger experiments in cooperation had taught middlemen the advisability of fairer dealing with farmers and, by encouraging the establishment of mail-order supply houses, had prevented the return of abuses characteristic of the earlier regime.⁴

To these successes, which in part deprived the agrarian movement of its *raison d'être*, were added other developments over which the farmers had had less control. The successful resumption of specie payments in 1879 was accompanied by an actual increase in the volume of the currency. A temporary return to higher prices for agricultural produce followed. This removed another cause of unrest and deprived the "Greenback song" of its "ancient charm."⁵ Finally, the transition from a frontier economy to a specialized agricultural system well adapted to the resources of the State struck at the very foundations of the agrarian "crusade." Prolonged resistance to this change had characterized the years after 1860. It had,

¹ Solon J. Buck, *The Granger Movement* (Cambridge, Mass., 1913), 101-102.

² Illinois Secretary of State, *Blue Book*, 1899, p. 264.

³ Illinois Railroad and Warehouse Commission, *Annual Report*, 1888, p. xix.

⁴ Buck, *The Granger Movement*, 244-247.

⁵ *Chicago Express*, June 14, 1881.

in the stress and suffering which it evoked, sown the seeds of rural unrest. Its completion coincided with the final collapse of the Greenback movement.

The most significant aspect of this agricultural revolution was the decline of wheat to a secondary place among the cereals. Increasing western competition and the entrance of Russian and Indian wheat into world markets had precipitated a long decline in prices and reduced profits on its production to a minimum. In Illinois receipts from the wheat crop from 1881 to 1896 were estimated at lower than the cost of production.⁶ Disastrous crop failures accelerated the abandonment of wheat as a single crop. Spring wheat lost all importance in Illinois. Its cultivation was restricted to the northern counties where the yield was less than the local demand. In similar fashion, the production of winter wheat was confined to a distinct area. By 1885 its cultivation was limited very largely to counties in the west and southwest and to six counties in the southeast along the lower Wabash River.⁷ In 1890 less than a sixth of the acreage devoted to cereals in Illinois was planted in wheat. Production had fallen nearly 14,000,000 bushels from the record of 1879.⁸

In place of wheat, corn was king. Food for man and beast alike, a money crop through sale on the market or by indirection in the fattening of livestock, it discovered in the black prairies and bottoms of central Illinois an area unsurpassed in fertility. All of the State, except the hills of the southern part known as "Egypt," lay within the Midwestern corn belt. Over half of the cereal acreage of Illinois farms was devoted to corn production. The corn crop accounted for 60 percent of the total value of all cereals in 1890 and was rightfully regarded as the basis of whatever prosperity rural Illinois enjoyed.⁹ Falling prices, however, resulted from the development of newer

producing areas farther west. This reduced annual returns in Illinois to a point where they failed to equal the cost of production from 1881 to 1889, according to the State Board of Agriculture. This resulted in a decline in the acreage devoted to corn in the southern counties with the result that its production tended to concentrate on the fertile prairies and bottoms of central Illinois, a region which came more and more to be known as the "corn belt" of the State.¹⁰

Oats enjoyed a growing popularity in marked contrast to the decline in wheat production and the shrinking acreage devoted to corn. The steady increase in work animals on the farms, a condition that was partially the result of the increased use of horse-drawn agricultural machinery, was an important factor in this development. In the decade before 1890 the oats acreage doubled. The yield increased over 100 percent. Within a short period of time, as one observer remarked, "Northern and Central Illinois have become one vast oat field, trespassing . . . largely upon the acreage of corn."¹¹ No crop at that time proved more remunerative to the farmer, nor yielded a better return for the labor expended, while its planting enabled farm operators to rotate their crops and conserve the fertility of the soil. Oats production was confined principally to northern and central Illinois. The area of heaviest production was located in the counties to the east of Peoria. It was increasingly important in this region as a money crop.¹²

Greater emphasis upon dairying and livestock was a logical result of the decreasing income from wheat and corn. Lands formerly devoted to wheat were sown to grass and grazed or else reserved for hay, a practice that reflected the needs of the increasing number of livestock in Illinois. By 1889 the acreage in grass in northern and central Illinois equalled that in oats or corn.¹³ The value of animal products constituted an increasing propor-

⁶ Illinois State Board of Agriculture, *Circular 174* (Springfield, 1897), 4.

⁷ *Chicago Daily Tribune*, May 23, 27, 1885; *Prairie Farmer* (Chicago), June 6, Sept. 12, Oct. 3, 1885; U. S. Census Office, 11th Census, 1890, *Report on the Statistics of Agriculture* (Washington, 1895), 14. According to the *Chicago Daily Tribune*, Mar. 23, 1889, southern Illinois was "the great wheat field of the State."

⁸ U. S. Census Office, 11th Census, 1890, *Report on the Statistics of Agriculture*, 7-9, 15, 96. Over 1,400,000 acres were withdrawn from wheat cultivation during 1881-90.

⁹ *Ibid.*, 7-9, 12; *Chicago Daily Tribune*, Sept. 3, 1885.

¹⁰ *Prairie Farmer*, June 14, 1890; *Chicago Daily Tribune*, Feb. 3, 1890; U. S. Census Office, 11th Census, 1890, *Report on the Statistics of Agriculture*, 12-13.

¹¹ *Ibid.*, 18, 95; *Chicago Daily Tribune*, Mar. 30, 1889.

¹² U. S. Census Office, 11th Census, 1890, *Report on the Statistics of Agriculture*, map 15; "Annual Review of Trade and Commerce," *Chicago Daily Tribune*, Jan. 1, 1887, Jan. 1, 1891.

¹³ *Ibid.*, Mar. 30, 1889, Feb. 17, 1890; *Prairie Farmer*, Feb. 7, 1885.

tion of the total farm income of the State. Dairying increased even more rapidly. Of the total value of livestock products the return from dairying rose from over 18 to nearly 30 percent during 1884-1894.¹⁴ In 1885 there were already some 497 creameries and "butter factories" in Illinois. Ten years later the total capital invested in dairying exceeded \$300,000,000. This was "nearly twice as much as that invested in all the incorporated business companies of the State."¹⁵ This huge investment was confined chiefly to the northern counties where the Illinois State Dairymen's Association represented actively the interest of the dairying industry. Its market was found chiefly in metropolitan Chicago.¹⁶

The influence of rapidly growing urban areas and of the Chicago market was reflected in the breeding and fattening of livestock to supply the huge meat-packing industry. High-grade beef cattle were bred in Illinois. To supplement these and enhance the value of the corn crop, feeders were imported from the western ranges. Fattened on home-grown corn both domestic and imported cattle were marketed at the Union Stock Yards in south-side Chicago. Cattle feeding was concentrated in the northwestern counties. Hog raising was especially profitable owing to a favorable corn-hog price ratio during 1882-1896 (save for 1887 and 1889) and concentrated increasingly in the corn-belt counties in the central and northern districts.¹⁷

Still another departure from the old frontier economy appeared in the development of truck gardening. This change likewise reflected the growing importance of urban markets. In truck gardening the counties of "Egypt" were pre-eminent. As an early season market garden for the northwest, the region between Cairo and Centralia shipped increasing quantities of small fruits, melons, and vegetables (onions, "Irish" and sweet potatoes, spinach, and tomatoes) to Chicago,

Detroit, and other cities. In one week in early June 1885, for example, over two hundred "great carloads" of strawberries were received in Chicago from the southern counties. Another truck-gardening region was located around Alton which shipped chiefly to Saint Louis.¹⁸ To truck crops southern Illinois added a monopoly of the orchard fruits grown within the State. Fruit raising seemed "destined to become the most important business of this section of our country" as a correspondent wrote to the *Western Rural* from Carbondale in 1887.¹⁹ By 1890 a State horticultural society had been organized to foster the interests of the fruit growers and promote greater interest in this field of agricultural endeavor.

The result of these changes was already apparent by 1885. Agricultural Illinois had come into the possession of a diversified economy. In place of the fluctuating one-crop system of frontier days, it produced a variety of specialized crops, fruits, and livestock products which were especially adapted to the advantages found in the different parts of the State. The result of the stimulus of rapidly developing urban markets on the one hand and on the other of pressure from the rapid extension westward of the cultivated area beyond the Missouri River, this revolution stabilized the economy of rural Illinois and protected it from the worst effects of western competition. The steady decline of agrarian discontent in the eighties reflected the improved condition of agriculture. Local conditions promised to all appearances long years of prosperity to the farmer and utter extinction of the third-party movement in the State.

This, however, was not to be. Forces that were both national and international in scope worked increasingly in the late eighties to diminish the margin of agricultural profit. At the same time there were inaugurated a second series of revolutionary changes in rural Illinois which fanned the dying embers of the farmers' movement. Joined with these were other considerations, originating in urban-industrial centers, that stimulated a limited revival of the "agrarian crusade."

The most apparent of all causes for renewed rural unrest was the prolonged decline in prices received for agricultural products. Readily ascertainable this phenomenon came to be regarded popularly as the worst of all those ills to which rural life was heir. For example, in the case of wheat,

¹⁴ Ernest Ludlow Bogart and Charles Manfred Thompson, *The Industrial State, 1870-1893 (The Centennial History of Illinois, v. 4, Springfield, 1920)*, 231, 246.

¹⁵ Illinois Farmers' Institute, *Annual Report*, 1896, p. 56; *Prairie Farmer*, May 9, 1885.

¹⁶ *Chicago Daily Tribune*, Jan. 24, 25, 1890; U. S. Census Office, 11th Census, 1890, *Report on the Statistics of Agriculture*, 37, 94.

¹⁷ *Ibid.*, 93; Fred A. Shannon, *The Farmer's Last Frontier: Agriculture, 1860-1897* (New York, 1945), 168.

¹⁸ *Prairie Farmer*, May 16, June 13, 1885.

¹⁹ *Western Rural* (Chicago), 25:735 (Nov. 12, 1887).

the April average price in Chicago fell from \$1.14 in 1882 to 85 cents in 1889. In the same period the price of corn fell from 67 to 34 cents a bushel and oats dropped from 43 cents to 22. On the Livestock Exchange hog prices fell from \$7.25 a hundred pounds to \$4.25 in the same 8-year interval while cattle experienced a still heavier decline. The prices of sheep, butter, and cheese fell in proportion.²⁰ Although a temporary recovery in farm produce prices occurred in 1890-91 they dropped rapidly thereafter until in 1895-96 they reached the lowest level recorded in the history of American agriculture between the Civil War and 1914. Wheat was under 53 cents a bushel in December 1895. Corn sold for less than 23 cents a year later while in the same months oats were marketed for 16½ cents and potatoes at 18 cents a bushel. From 1885 to 1896 the index of agricultural prices ran consistently below that of 1860.²¹

Viewed as an isolated phenomenon this depression of farm produce prices appeared to be indicative of an acute crisis throughout all rural areas. It did not fail to attract widespread attention in town and country alike or to arouse volumes of speculation as to cause and effect. Accompanied as it was by a similar decline in the price of many manufactured articles, it seemed to the uninitiated to have resulted from a deflation of the currency in the face of rapid increases in population and production.

Publicists and politicians called attention to a variety of factors that were offered as irrefutable evidence in support of this proposition. Some of these received what would now seem to have been undue emphasis. Among them were the partial retirement of the greenback currency during Reconstruction, the "demonetization of silver," or, as it was more graphically described, the "crime of '73," and the decline in national banknote circulation that resulted from the liquidation of the national debt during the successive administrations of Chester A. Arthur and Grover Cleveland. Whatever differences of opinion developed as to the cause, the spokesmen of farm organizations contended with astonishing unanimity that the appreciation of the dollar, of gold, was a fundamen-

tal grievance of organized agriculture. Platforms of State and national farmers' organizations gave prominent place to monetary planks that were designed to remedy this while gallons of ink were wasted in treatises demonstrating that currency deflation was the underlying cause of the prolonged agricultural depression.²²

A more thorough examination of the problem, however, revealed other causes of the decline in prices to experienced observers. Though hardly a champion of the farmer, David A. Wells, the noted free-trade economist of the day, discovered adequate causes for this in conditions that were entirely disassociated from a deflation of the currency. Among the contributing factors that he emphasized was the remarkable cheapening in the cost of production in industry and farming due to the application of greater amounts of capital and the development of a more effective division of labor. He noted the recent opening up of immense areas in the United States, Australia, Argentina, Russia, India, and New Zealand by railroad building during the past two decades and called attention to the drastic reduction in ocean freight rates that occurred simultaneously with the cheapening of land transportation. This two-fold revolution, he maintained, had served to stimulate economic expansion until world markets were glutted with both agricultural and industrial products.²³ Furthermore, a report of the Secretary of the Treasury on December 1, 1890 revealed that an absolute and per capita increase had occurred in the currency of the United States in the previous decade.²⁴ Although it failed to receive due attention in farming

²² A list of these volumes would almost constitute a roll call of the "reform" literature of the last phase of the "agrarian crusade." The following are representative: N. B. Ashby, *The Riddle of the Sphinx* (Des Moines, 1890); N. A. Dunning, *The Philosophy of Price, and Its Relation to Domestic Currency* (Chicago, 1887); W. H. Harvey, *Coin's Financial School* (Chicago, 1894); B. S. Heath, *Labor and Finance Revolution* (ed. 6, Chicago, 1891); Thomas E. Hill, *Money Found* (revised ed., Chicago, 1894); Lester C. Hubbard, *The Coming Climax in the Destinies of America* (Chicago, 1891); Samuel Leavitt, *Our Money Wars* (Boston, 1894); S. F. Norton, *Ten Men of Money Island* (Chicago, 1892).

²³ Wells, *Recent Economic Changes*, 167-190, and "The Downfall of Certain Financial Fallacies," *Forum* (New York), 16:133-135 (October 1893). Cf. *Chicago Daily Tribune*, Feb. 14, Mar. 11, Apr. 3, Oct. 3, 10, 15, 1890.

²⁴ *Chicago Daily Tribune*, Dec. 3, 1890.

²⁰ *Chicago Daily Tribune*, Apr. 28, 1890; David A. Wells, *Recent Economic Changes* (New York, 1899; ed. 1, 1889), 167.

²¹ U. S. Dept. of Agriculture, *Yearbook*, 1899, p. 759-763.

circles, this demolished the theory that currency deflation was an important cause of rural ills.

A few months earlier a report on wholesale prices made to the United States Senate had suggested that the farming community was actually the beneficiary instead of the victim of the general fall in prices. Although the validity of the tables in this so-called Aldrich Report has since been questioned, they may at least be regarded as the reply of the business interests to the charge that a diabolical conspiracy had engineered the ruin of agriculture. According to Senator Aldrich, the general index of wholesale prices in the United States during 1880-1891 had ranged considerably below the level of the wholesale prices of agricultural produce.²⁵ Assuming that retail prices followed the same trends, it appeared that the farmers as consumers had enjoyed a distinct advantage over city dwellers for a full decade. Although the historian must accept this conclusion with reservations, it can hardly be doubted that currency deflation, as a reality, must be eliminated as a substantial cause for rural distress. It remained, of course, a psychological factor of prime importance since the farmers were moved to indignation as much by illusion as by reality.

The depression of farm produce prices to below the cost of production at times could hardly have failed to operate as a general cause of unrest in single-crop areas but not in the corn belt of Illinois where hog and cattle feeders profited almost every year to 1896 from fattening stock with low-priced corn. Unrest was apt to develop among farmers who were burdened with mortgage indebtedness. Of these there were many in the newly settled areas of the west where foreclosures precipitated by crop failures, exorbitant interest, high commission charges, and falling prices were a primary source of discontent.²⁶

Even in Illinois, where crop failures were less disastrous and interest charges were considerably lower, the effect of a sharp appreciation in the purchasing power of the dollar in two successive 5-year periods was to increase heavily the mortgage

burden.²⁷ Some 90,389 farms including 7,966,566 acres were mortgaged in Illinois in 1887, an increase of 12 percent in number and of 19 percent in total indebtedness in eight years. These mortgages averaged four years in duration and paid 7 percent interest, commissions extra.²⁸ Under such circumstances the falling price level operated independently as a cause of distress quite apart from the relative purchasing power of farmers and urban wage earners.

The inauguration of a second series of changes in Illinois agriculture was hardly a major cause of agrarian unrest. Beginning before the process of diversification had ended, they reflected primarily the increased profitability of specialized agriculture. In essence they were due to the application of increasing amounts of capital to farming with the purpose of increasing the net cash returns. This practice had been foreshadowed to some extent by the great farms of the cattle raisers of the fifties and sixties in Illinois. The extensive utilization of labor-saving machinery on the farm after the Civil War, which had resulted in a three-fold increase in the grain production per laborer in three decades, had evinced a much more widespread employment of capital in farming. Even in this field, however, further development occurred with substantial savings to farm operators after 1880 when the steady increase in the number of horses on the farms reflected the wider employment of agricultural machinery.²⁹ The transition to a

²⁷ Ralph G. Hurlin, "The Course of United States Wholesale Prices for 100 Years," *The Annalist* (New York), 17:425 (Apr. 11, 1891). Alex Mathews Arnett, *The Populist Movement in Georgia* (New York, 1922), 67-69, estimates that the purchasing power of the dollar rose 11.7 and 11.6 percent in the two successive 5-year periods of the eighties.

²⁸ Illinois Bureau of Labor Statistics, *Fifth Biennial Report*, 1888, p. liii, lvii-lviii. Cf. Daniel R. Goodloe, "Western Farm Mortgages," *Forum*, 10:347 (November 1890). The total farm mortgage debt in Illinois was placed at \$123,733,098 in 1887.

²⁹ The census statistics of 1890 fail to take into account the great decline in the cost and the considerable increase in efficiency of farm machinery. The increase in the value of agricultural machinery in Illinois during 1880-90 was only \$717,000. In the case of the reaper, for example, the introduction of the twine binder was followed by an increase in annual sales from 60,000 in 1880 to 250,000 in 1885. A part of this increase must have been absorbed in Illinois by the rapid extension of oats production. Arthur C. Page, "McCormick, Builder of the Reaper," *Prairie Farmer*,

²⁵ "Report on Wholesale Prices, on Wages, and on Transportation," by Senator Nelson W. Aldrich from the Committee on Finance, Mar. 3, 1893, 52 Congress, 2 Session, *Senate Report 1394*, pt. 1, p. 10-11. The findings on wholesale prices were first reported to the Senate on Mar. 3, 1890.

²⁶ *Chicago Daily Tribune*, Jan. 30, Aug. 1, 1890; John D. Hicks, *The Populist Revolt* (Minneapolis, 1931), 55-59, 81-85, 87-94.

diversified economy also involved the application of capital in liberal sums to the breeding of high-grade hogs, the production of blooded cattle, and the purchase of feeder stock from western ranges. So did the stocking of dairy farms, the planting of pastures and orchards, and the development of truck gardening.

Of considerable significance as a cause of capital investment after 1880 were the attempts to increase the productivity of the soil through permanent improvements. These found expression chiefly in tile and surface drainage. Beginning in the late seventies, the drainage movement gathered momentum rapidly. In three years, 1883-85, Illinois farmers laid over 38,248 miles of sub-surface tile drains.³⁰ In the succeeding eleven years over 77,650 miles of tile were laid. By 1895 there were some 26 feet of sub-surface tiling for each acre of improved farm land in the State.³¹ Surface draining by means of ditches supplementary to or independent of the underground systems was practiced widely, although, as was the case with tile drainage, it was confined chiefly to the flat and very fertile counties in the east central portion. This was the heart of the State's corn and oats belt.

Although costing heavily these improvements paid as high as 8 percent on the investment. They assured farmers good crops "in almost any season, wet or dry." In addition, the drainage movement resulted in a significant increase in land values that was estimated at as high as 100 percent in the Twelfth Congressional District by 1896. Increases of from 25 to 50 percent over valuations of 1880 had already been noted in 1887 in the region affected by the movement. In the entire State the estimated increase in land values was but 10 percent in this period. Occurring as it did in the face of a declining agricultural price level, this increase in land values was striking proof of the profits with which systematic drainage rewarded investors.³²

100: 471 (Mar. 17, 1928). Cf. Shannon, *The Farmer's Last Frontier*, 128-145, for an excellent account of the development of farm mechanization and its general effects.

³⁰ *Prairie Farmer*, Oct. 31, 1885.

³¹ Bogart and Thompson, *The Industrial State*, 230.

³² W. T. Abrams of Garrett, Illinois, to the McCormick Harvesting Machine Company, Apr. 27, 1897, McCormick Harvesting Machine Company MSS; Illinois Farmers' Institute, *Annual Report*, 1896, p. 25; Illinois Bureau of Labor Statistics, *Fifth Biennial*

A considerable portion of the increased farm mortgage indebtedness alluded to above was probably due to the enormous amount of draining by Illinois farmers in the decade and a half following 1880.³³ Borrowing by cattle raisers and cattle feeders as a means of facilitating their operations,³⁴ the rapid expansion of dairying and speculative buying of lands by farmers in the most fertile areas were other sources of indebtedness that must be regarded as phases of the capitalization of agriculture in progress.³⁵ Of the 21 counties showing the heaviest farm mortgage debt in 1887, 12 were situated within the area affected most by the drainage movement,³⁶ 4 were within the stock-raising and stock-feeding district in the western part of the old Military Tract between the Rock and Illinois rivers,³⁷ and 4 were among the northern counties where dairying was of increasing importance.³⁸ These counties, although encumbered with 41 percent of the total farm debt of the State, possessed 38 percent of the total farm land value and were, with few exceptions, the wealthiest agricultural counties in Illinois.³⁹

In view of these facts, it is difficult to escape the conclusion that the increased farm mortgage debt of Illinois was, within these areas, an indication of agricultural prosperity rather than evidence of increasing distress. Support for this contention is found in the fact that the percentage of outstanding farm mortgages foreclosed increased but slightly from 3.81 in 1880 to 4.82 seven years later. This would hardly indicate great distress in rural

Report, 1888, p. lvi; *Chicago Daily Tribune*, Sept. 18, 1889, Feb. 17, 1890. This development is overlooked in Shannon, *The Farmer's Last Frontier*, but see p. 170, 172.

³³ *Chicago Daily Tribune*, Mar. 21, 1890.

³⁴ *Ibid.*, Mar. 21, 1891.

³⁵ *Chicago Daily Tribune*, Mar. 19, 1892, Mar. 30, 1893; Illinois Farmers' Institute, *Annual Report*, 1896, p. 36.

³⁶ Livingston, LaSalle, Peoria, Iroquois, Sangamon, Champaign, McLean, Will, Vermilion, Kankakee, Tazewell, and Logan counties.

³⁷ Knox, Henry, Whiteside, and Bureau counties.

³⁸ Kane, Ogle, Lee and Stephenson counties.

³⁹ Eight of the nine counties recording more than \$1,000,000 in farm mortgages, excluding Cook, were from this area in 1887. The ninth, St. Clair, was experiencing a considerable expansion of dairying owing to the stimulus of the St. Louis market. Illinois Bureau of Labor Statistics, *Sixth Biennial Report*, 1890, p. 252-262.

Illinois at the end of the decade.⁴⁰ Only in the districts unaffected by large-scale capital improvements, notably in the wheat-growing counties along the Mississippi and Wabash rivers to the south of the latitude of Peoria, together with the southern counties generally, could the pressure of falling prices and western competition have been felt severely. In the other districts farmers were fortified by the improvements noted and by the cultivation of products best adapted to their resources. They were thus more immune to the effects of the agricultural depression, as the increasing value of their land would indicate.

It is apparent that the greatest advantage from the second series of changes in Illinois farming just described must have accrued to landholders possessing either capital or credit in sufficient amounts to enable them to make the necessary improvements. The profitability of their investments must also have suggested to them the advisability of purchasing adjacent lands and of improving them in like manner. More than one progressive farmer followed the example of S. Thornton K. Prime, the widely known crop reporter, agricultural expert, free-trader, and antimonopolist, of Dwight, a town 30 miles west of Kankakee. Prime had for years been an advocate of drainage and improved farming methods. After purchasing the farm of a bankrupt neighbor, he thoroughly underdrained it. He then rented it to a tenant for two-fifths of the corn crop. The venture, according to his statement, netted 8 percent on the investment of \$15,000.⁴¹ Profitable undertakings of this nature were sure to invite imitation.

Farmers from less favored counties in Illinois eagerly bought up available farms in the fertile corn belt of the State.⁴² Capitalists from still farther afield, seeking profitable investments, sought also a share in the golden crop of the black prairies, extending in this period the system of large estates that dated from the initial operations of frontier landlords before the Civil War. After purchasing numerous farms such operators placed them under superintendents and rented them to tenants. In this manner investors reaped returns greater than would have resulted from equal investments of capital in farm mortgages.⁴³ The

arch type of these absentee landlords was the so-called Viscount Thomas A. Scully. He was no other than the son of an enterprising Irish landlord who had begun the family policy of investing heavily in American farm lands. Scully's holdings included 200,000 acres of rich land in the Middle West. In 1887 he possessed 30,000 acres in fertile farms in Logan County, Illinois, alone. In 1890 it was erroneously reported that 90,000 acres in Livingston County yielded Scully rents of \$400,000 annually. His holdings were subdivided and let to tenants under "an iron-clad system of one year leases," the hostile press declared unjustly.⁴⁴

Other landlords appeared with large holdings. Among these was a Judge Moore of Clinton County, owner of 6,000 acres and inventor of a supposedly "scientific system of tenantry." Another was Colonel Thomas Snell of Clinton, owner and manager of thousands of acres in Illinois and Iowa.⁴⁵ Such landlords gradually introduced cash rents in place of an earlier system of share cropping. The risks of farming were enjoyed thereafter solely by the tenants who paid by the acre irrespective of the yield. Cash renting made the most progress before 1890 in Cook and McLean counties, although about a third of the tenants in Livingston, Iroquois, Christian, and Madison counties rented farms on these terms. In many cases, also, share rents were pushed up to the equivalent of cash as a result of this innovation.⁴⁶

The increase of tenant farming revealed fully the effects of the capitalization of agriculture in Illinois. The Eleventh Census reported only a modest increase in the proportion of tenants among farm operators in the decade before 1890.

⁴⁰ *Chicago Express*, Feb. 13, 1886; *Western Rural*, 24:88 (Feb. 6, 1886); *Prairie Farmer*, June 21, 1890; Bogart and Thompson, *The Industrial State*, 220-221; and Paul W. Gates, *Frontier Landlords and Pioneer Tenants* (Ithaca, N. Y., 1945), 34-61, for the authoritative treatment of the Scully estates, and *passim* for the development of landlordism in Illinois from 1830 to 1900.

⁴¹ *Chicago Daily Tribune*, Mar. 19, 1892, Mar. 30, 1893.

⁴² *Ibid.*; U. S. Census Office, 11th Census, 1890, *Report on the Statistics of Agriculture*, 134-135. La-Wanda Fenlason Cox, "Tenancy in the United States, 1865-1900," *Agricultural History*, 18: 99-100 (July 1944), indicates that the same trend to cash rents appeared in the cotton belt, with similar effects upon tenant status.

⁴³ *Ibid.*, 206. Cf. *Chicago Daily Tribune*, Sept. 18, 1889, Mar. 21, 27, 1890.

⁴⁴ *Chicago Daily Tribune*, Feb. 17, 1890.

⁴⁵ *Ibid.*, Mar. 30, 1893.

⁴⁶ *Ibid.*, Mar. 19, 1892.

This was from 31½ to 34 percent. Of more significance was the distinct tendency for tenant farming to concentrate in the corn belt where the capital improvements were the most extensive. In this region the proportion of tenants ranged from 35 to 45 percent of the farm operators in 1890 as against 25 to 35 percent a decade earlier. The next 10-year period witnessed a steady increase of tenancy in this area. In 1900 in twenty-six counties an average of over 45 percent of the farm operators were tenants. But "the most phenomenal increase of tenancy in any section" of the State in this decade was in the old Military Tract. This revealed the spread of highly capitalized farming westward through the center of the State to the Mississippi River. From 1890 to 1900 the number of tenant farmers in Illinois increased from 81,833 to 103,698.⁴⁷

The prosperity of rural Illinois under the new regime was beyond dispute. Land values and rents rose in the face of falling prices for farm produce. The total annual value of Illinois farm products rose until they doubled the total farm mortgage indebtedness of the State.⁴⁸ Successful farmers enlarged their holdings, placed them and the old homestead in the hands of tenants, and moved to the county seats or even to neighboring cities. The splendid mansions of an older rural culture of sturdy owner-operators were left to decay while the absentee proprietors sought assimilation into a social order long regarded as alien to the farmer.⁴⁹ This migration of the most successful farmers to urban centers occurred in the more fertile districts of Illinois in spite of the construction of good roads and a general improvement in means of communication that destroyed the isolation that had formerly characterized rural life.⁵⁰

In the place of the more substantial owners who had formerly dominated the rural community, a nomadic class of tenants made its appearance. The efforts of tenants to secure farms with the most productive improvements resulted only in

a fierce competition for the better holdings. This produced a rise in rents to ruinous levels. In the vicinity of Clinton, Illinois, as well as in De Witt, Logan, Champaign, Piatt, McLean, and Macon counties share rents rose from one-third or two-fifths of the crop to one-half of the grain raised by the spring of 1892. In Macon County, by March of the following year, cash rents had risen from 3 or 4 dollars an acre to 6 to 8, or the equivalent of three-fifths of the crop.⁵¹

Small farmers struggled to adjust themselves to a changing world. Even when free from debt and holding from 40 acres to a quarter section they found themselves the victims of the rapid rise in land values. Lacking the means of improving their land on a scale commensurate with the operations of the capitalist farmers and landlords, they were unable to benefit from the larger yields and diminished risks that resulted from the new methods. They found themselves unable to expand their operations or to purchase farms for their children because of the rising price of land that resulted from the competition for farms and from capital improvements.

The small farmer also found himself burdened with taxes that increased with the general appreciation in land values. Poorer farmers found themselves at an increasing disadvantage in the most fertile counties of Illinois while those in debt suffered in addition from the continuing decline in produce prices. Thus economic pressure reinforced the temptation to sell out at the prevailing high prices and go elsewhere in search of cheaper land. Slowly but surely, the poorer farm owners on the rich prairies were crowded out or found themselves face to face with the unpleasant prospect of being reduced to tenants. Gradually the doors of opportunity were being closed to the class that formed the backbone of rural democracy.⁵²

In McLean as in other counties farmers of this type were convinced that "the few capitalists in the county are trying to get all the land, and they, the middle class, feel that there is no show for them."⁵³ As a correspondent of the *Chicago Herald* reported:

⁵¹ *Ibid.*, Mar. 30, 1893.

⁵² These facts are established beyond question in two investigations by the *Chicago Daily Tribune* that were published in its numbers of Mar. 19, 1892 and Mar. 30, 1893. Cf. Illinois Farmers' Institute, *Annual Report*, 1896, p. 29, reporting from the Fifteenth Congressional District.

⁵³ *Chicago Daily Tribune*, Mar. 30, 1893.

⁴⁷ *Ibid.*, 101; 11th Census, 1890, *Report on the Statistics of Agriculture*, 4-5, 92, 134-135; Bogart and Thompson, *The Industrial State*, 220-221; Charles Leslie Stewart, *Land Tenure in the United States with Special Reference to Illinois* (Urbana, 1916), 45, 49.

⁴⁸ *Chicago Daily Tribune*, Mar. 21, 1890.

⁴⁹ *Western Rural*, 53:49 (Jan. 24, 1895); Joseph B. Ross, "The Agrarian Revolution in the Middle West," *North American Review*, 190:380-384 (New York, 1909).

⁵⁰ *Ibid.*, 381; *Chicago Daily Tribune*, Jan. 19, 1892.

Poor men are being crowded out in Illinois. The independent farmer is every year finding his pathway narrower, his hill more steep, his load more heavy. The renter and the hired man are taking the place of a free population. Thirty families last week left a single neighborhood in McLean county because since 1888 land values have increased 40 per cent all about them. Increased taxation follows this rise in valuation and farming—which yields only a modest profit at best—will not keep pace with the added burden. Those whose farms are unencumbered can do better with their capital in newer states. An inquiry develops that the buyers are investors, not farmers. Home after home has fallen into the hands of the capitalists who require a cash rental too hopelessly high to admit a margin of profit to the husbandman, and on terms so severe that surrender means loss. . . .⁵⁴

Thousands took the road to the west, moving to Iowa or other States where 3 or 4 acres could be purchased for the price of one in the corn belt of Illinois. In 1892 it was estimated that 3,000 persons would leave central Illinois "for the cheaper lands of the west."⁵⁵ Tenants emigrated as well, in such numbers in this year from De Witt, Logan, Champaign, Piatt, McLean, and Macon counties as to attract public notice. This was from the region where it was reported that rents had risen to the equivalent of half to three-fifths of the crop. In the west a successful ambitious tenant from Illinois could hope to set up for himself on his own. Thus Illinois was presented with the anomaly of people growing restless and migrating from a country where the land was increasing in value "almost hourly" and where the soil was so productive that it yielded "to the tiller as if his plowshare were a magician's wand." Prosperity, shared chiefly by a few, produced a veritable exodus from the promised land.⁵⁶

Home-seekers' excursions were advertised by the western railroads summer after summer in the agricultural journals and rural press of Illinois. In the *Prairie Farmer* of March 3, 1893, for example, a letter from J. Q. Jones of De Witt County called attention to a special train of thirty-six cars that had left for Nebraska, carrying sixty families to Chase County. In 1892-93 this emigration from central Illinois exceeded all previous records. Twenty-nine counties in rural Illinois, many of them the richest and most fertile in the State, already had shown a loss in population in

the Eleventh Census. A portion of this was due, however, to the drift of young people to the cities. This, too, had become a significant population movement in Illinois.⁵⁷

From this situation sprang some of the most deep-seated causes of agrarian unrest in Illinois in the late eighties and early nineties. Among them were the increasing inability of successful tenants and farmers in moderate circumstances to acquire land; the rising rent level and the change to cash rents; the increase of taxes incident to rising values; and the apprehensions aroused by the increase of landlordism and tenancy.

To these must be added the psychological as well as the economic effects of the fall in prices and the decline in rural population. Both were referred to repeatedly in contemporary literature as being indicative of a marked decline in rural prosperity. It was so frequently asserted by agrarian leaders, for example, that the decline in the rural population of Illinois was due to the fact that farming had ceased to pay that it must be assumed that this was put forward in all sincerity.⁵⁸ The foregoing analysis, however, suggests that the reverse was true of Illinois agriculture save in the restricted wheat-growing region in the southern and western counties and among small farmers without capital. It must be concluded, therefore, that the dissatisfaction among farmers with rural population trends in Illinois sprang from a misconception of the true state of affairs. The fall in prices, as has been seen, was hardly a cause of economic hardship outside of the wheat-growing areas, although the downward price trend was hardly a cause of optimism among rural people.

Emigration to the trans-Mississippi States, on the other hand, served to a limited extent as a safety valve for much of the rural discontent that otherwise would have found expression within Illinois. The stress and strain that accompanied the breaking of old ties and moving westward

⁵⁷ *Prairie Farmer*, Dec. 26, 1885, Aug. 2, 1890; Illinois Bureau of Labor Statistics, *Fifth Biennial Report*, 1888, p. lvi; *Appleton's Annual Cyclopaedia*, 30:426 (New York, 1891); *Chicago Daily Tribune*, Dec. 15, 1888, Nov. 25, Dec. 10, 1890, July 11, Aug. 12, 1891; Illinois Department of Agriculture, *Transactions*, 1891, p. 2; Shannon, *The Farmer's Last Frontier*, 39.

⁵⁴ Quoted in *Chicago Vanguard*, June 4, 1892.

⁵⁵ *Ibid.* Cf. Gates, *Frontier Landlords and Pioneer Tenants*, 51-53.

⁵⁶ *Chicago Daily Tribune*, Mar. 30, 1893.

⁵⁸ Address by Alson J. Streeter, July 15, 1887, Lake Bluff, Illinois in the Streeter Scrapbook; T. D. Hinckley, "The Cause of Decay," *National Economist* (Washington, D. C.), 1:37 (Apr. 16, 1889); Hubbard, *The Coming Climax in the Destinies of America*, 61.

must have found some expression in the bitterness and extravagance of the Populist movement. But it was expressed in many cases by the emigrants after they had settled in their new homes farther west. The conviction that the old freedom was going, and the resolve that "My son shall not be a slave"⁵⁹ characterized both the westward movement from Illinois and the sentiment that precipitated the Populist revolt in Kansas and Nebraska. Thus the unprecedented emigration of 1892-93, as well as that of the eighties, served at once to weaken the agrarian protest in Illinois and to swell it farther west whenever the emigrants found hard times instead of prosperity at the end of the journey.

To agricultural depression and agrarian revolution were added conditions that burdened rich and poor farmers alike. Lingering bitterness against the railroads was reinforced by conditions over which the Illinois Railroad and Warehouse Commission had little control. This board had functioned efficiently for fifteen years, reducing rates repeatedly on agricultural produce and on articles of rural consumption.⁶⁰ But the fact that in spite of its regulations many railroads in Illinois continued to maintain high dividends upon capitalization that was largely fictitious left farmers a little sore.⁶¹

A far greater source of dissatisfaction, however, lay in the favorable discrimination shown by the railroads to shippers of competing farm products from States farther west where land and costs of production were cheaper than in Illinois. The *Farmers' Voice*, published by Montgomery, Ward and Company in Chicago, contended in 1892 that this differential in railroad rates in favor of the cheaper lands in Iowa and Kansas was a major cause of westward emigration from Illinois.⁶² This practice was placed beyond the jurisdiction of the Railroad and Warehouse Commission in 1886 by the United States Supreme Court in the *Wabash* case and was permitted to continue with-

out serious interference well into the next decade.⁶³ Its effect in increasing the pressure of western competition on Illinois explains a persistent sympathy with appeals for regulation or ownership of the railroads by the national government.

Far more important as a cause of agrarian unrest was what Governor John P. Altgeld termed a "giant of injustice,"⁶⁴ the revenue system of Illinois. In counties such as Pike it was bound up with the railroads. There a bonded debt incurred in aid of railway construction was the cause of heavy taxation.⁶⁵ This must have accounted for a portion of that strong radical tradition that made Pike the banner Alliance and Populist county of down-state Illinois. Furthermore, the railroads were notoriously underassessed in the levying of the general property tax. This and the chronic underassessment of banks and large corporate properties were regarded as bitter grievances by farmers' organizations.⁶⁶

The entire revenue system was fraught with injustice. It was so manipulated by corrupt means that the burden of taxation fell disproportionately upon the farmers.⁶⁷ Under it "the great concentrations of Wealth" contributed "comparatively little, while the owners of small and moderate sized properties" were "forced to bear nearly all the burdens of the Government."⁶⁸ Personal property was everywhere listed at but a fraction of its actual value, or was not listed at all, a practice in which "the monied classes of Chicago" were "the worst offenders." In the assessment of real property the story was practically the same. Here again Cook County offended far more than others. Its real estate in 1893 was assessed at but 7½ percent of its market value against an average of over 32 percent for the State at large. In Chicago the holders of "loop" property, the most valuable real estate in the Middle West, and the owners of costly residences and speculative holdings enjoyed an underassessment so disproport-

⁵⁹ Interview with Colonel Thomas Snell of Clinton a large landowner in Illinois and Iowa, in *Chicago Daily Tribune*, Mar. 19, 1892.

⁶⁰ Illinois Railroad and Warehouse Commission, *Annual Report*, 1886, p. xiii, 1888, p. xvii-xviii; *Western Rural*, 26:76 (Feb. 4, 1888).

⁶¹ *Ibid.*, 27:296 (May 11, 1889); *Chicago Daily Tribune*, Mar. 28, 1890.

⁶² *Farmers' Voice*, Apr. 16, 1892. Cf. Illinois Railroad and Warehouse Commission, *Annual Report*, 1888, p. xviii-xix; *Weekly Illinois State Journal*, Feb. 20, 1890; *Chicago Daily Tribune*, Mar. 7, Apr. 16, 1892.

⁶³ Illinois Railroad and Warehouse Commission, *Annual Report*, 1886, p. xx-xxi.

⁶⁴ Message to the General Assembly of Illinois, Jan. 10, 1895. *Chicago Daily Tribune*, Jan. 11, 1895.

⁶⁵ *Western Rural*, 25:265 (Apr. 23, 1887).

⁶⁶ C. Wood Davis, "The Farmer, the Investor, and the Railway," *Arena*, 3:301 (February 1891); *Prairie Farmer*, Feb. 28, 1891; *Chicago Daily Tribune*, Aug. 28, 1890.

⁶⁷ Illinois Bureau of Labor Statistics, *Eighth Biennial Report*, 1894, p. 263, 351-352; *Chicago Daily Tribune*, Mar. 29, 1893.

⁶⁸ Governor Altgeld's message of Jan. 10, 1895.

tionate as to leave men of small property paying taxes "from two to four times in proportion to their ability."⁶⁹

Systematic corruption of assessors by the largest real-estate holders found its counterpart in the corrupt manipulation of the State Board of Equalization by leading corporations. Its function was supposedly to work for a fair and equal tax assessment throughout Illinois. In actual practice it shielded large corporate properties so successfully that they escaped taxation altogether or succeeded individually in reducing their taxes by sums ranging from \$100,000 to \$400,000 a year.⁷⁰ The Pullman Company, which subjected the State to large expense in the summer of 1894, had listed its plant and "model" factory town as swamp land on the tax assessor's books in the village of Hyde Park. Before the great boycott and strike of that year, it was found to have paid virtually no taxes on properties conservatively valued at \$10,000,000.⁷¹ The great *Chicago Daily Tribune*, which was generally found in opposition to enlightened social legislation throughout the nineties, paid taxes on an assessment of only \$18,000 although its annual net income was over \$250,000.⁷² Such a system, in which the "rich and respectable" were "the most guilty" of violating the law, required full taxation of mortgaged farms in spite of heavy liens against them and was sure to invite the enmity of the farmers. As a cause of agricultural depression and rural unrest it developed with cumulative effect during the hard times of the nineties.⁷³

Considerable interest in the tariff as a cause of agricultural depression was exhibited by farmers and farm periodicals in Illinois. Many were aware of its effect in increasing the cost of living and in retarding the cheapening of transportation rates. As such it constituted a standing obstacle to the achievement of greater agricultural prosperity.⁷⁴

⁶⁹ Illinois Bureau of Labor Statistics, *Eighth Biennial Report*, 1894, p. 245-247, 263, 350-351; *Illinois State Register*, Feb. 28, 1894.

⁷⁰ Governor Altgeld's message of Jan. 10, 1895.

⁷¹ *Chicago Times*, June 21, 1894.

⁷² Harry Barnard, "Eagle Forgotten"; *The Life of John Peter Altgeld* (Indianapolis, 1938), 340.

⁷³ Illinois Bureau of Labor Statistics, *Eighth Biennial Report*, 1894, p. 353; Ashby, *The Riddle of the Sphinx*, 176-177; *Prairie Farmer*, Feb. 28, 1891; William A. Coutts, "Agricultural Depression in the United States: Its Causes and Remedies," Michigan Political Science Association, *Publications*, 2(6):43 (Ann Arbor, April 1897).

The political upheaval that drove the Republican Party from power in Illinois in 1890 was precipitated by the McKinley Tariff Act and gives force to the contention that the farmers of the State were vitally interested in the effect of the protective tariff upon their well-being.

Unfair railroad rates from the Missouri Valley, disproportionate taxation, and the tariff were but surface manifestations of a revolution that had altered the foundations of society in the Middle West. The industrialization of the Great Lakes region, the spread of the corporation, and the rise of "big business" had combined with the railroad and national banking systems in creating a new economic order. With it, in Illinois, there had developed a new division of labor and a marketing system that reduced farming from its former self-sufficient status to that of a specialized extractive industry dependent upon a host of middlemen for the sale of its products and the supply of its necessities. Middlemen, banks, and mortgage companies reminded the farmer that he was a mere producer of raw materials, "linked in an industrial chain" to boards of trade, to manufacturers, and to Wall Street. Farming, in the eyes of its champions, was reduced "to almost the minimum of industries," and the American farmer "to a mere hewer of wood and a drawer of water for the monopolists of the land."⁷⁵

Many farmers became firmly convinced that they were exploited as a class by monopolists who lived in the cities and accumulated there wealth that otherwise would have remained in rural communities. The evils of the "agency system," well known to the Grange, were now supplemented by the exorbitant charges of the Union Stock Yards Corporation at Chicago.⁷⁶ The speculative activities of the Chicago Board of Trade were widely condemned for their supposed effect upon the prices of farm produce to the detriment of farmers.⁷⁷ To these grievances were added the activities of that "hydra-headed monster,"⁷⁸ the trust, cherished offspring of "big business" in the

⁷⁴ *Ibid.*, 38-39; *Farmers' Call* (Quincy, Ill.) to the McCormick Harvesting Machine Company, May 10, 1890, in McCormick Harvesting Machine Company MSS; *Farmers' Voice*, Mar. 3, 1888; *Western Rural*, 27:296 (May 11, 1889).

⁷⁵ Illinois State Grange, *Journal of Proceedings*, 1890, p. 15; *Farmers' Voice*, Jan. 12, 1889, Dec. 23, 1893; Ashby, *The Riddle of the Sphinx*, 55-57, 211-212, 229-230.

⁷⁶ *Prairie Farmer*, Dec. 20, 1890, for resolutions of Illinois State Farmers' Alliance, Peoria, Dec. 11, 1890.

eighties. Binding twine, harvesters, grain drills, plows, cultivators, wagons, hoes, forks, barbed wire, iron, steel, axes, matches, oatmeal, sugar, rice, meats, condensed milk, borax, brooms, buttons, castor oil, fruit jars, powder, cutlery, soap, starch, umbrellas, wall paper, watches, window glass, sashes, doors, blinds, whips, hats, and wood screws were each controlled by some combination whose chief function was to rig the market and exploit the consuming public.⁷⁹

Small wonder that the trust replaced the middleman as the *bête noir* of the rural mind, or that in commenting upon a similar list the editor of the *Farmers' Voice* remarked: "Here are 88 bands of polite gentlemen as ever scuttled a ship or cut a throat."⁸⁰ Towering above them was "The Great Monopoly" whose manipulations of the price of coal oil affected every rural home in that age of kerosene lighting. Its owners ranked with Jay Gould as objects of popular antipathy. Behind them all, the farmers believed, there lurked the "money power," unifying trusts and corporations into an engine of oppression through its control of money and credit.⁸¹ Finally, as farm leaders firmly believed, the great political parties were in turn controlled and used "by combinations of special interests . . . to promote special measures for the benefit of themselves" at the expense of the American public.⁸²

The distribution of national wealth and income reflected, in farmers' eyes, the effects of railroad discriminations, tariffs, and the machinations of the "money power." In spite of the great increase in agricultural production farmers saw themselves outstripped and left far behind in the race for wealth. The cities, beneficiaries of the new order, swept far in the lead. Urban wealth increased some 600 percent in three decades, until, in 1890, it was three-fourths of the national total while rural wealth, though doubling, fell to 25 percent

of the whole.⁸³ Coupled with this was the bitter knowledge that the riches of the "Gilded Age" were concentrating in the hands of those who manipulated the banks, railroads, and trusts. A young economist writing under the influence of Henry George asserted in 1893 that 78 percent of the 4,047 millionaires in the United States owed their wealth to "permanent monopoly privileges."⁸⁴ A year before this the Omaha platform of the People's Party had broadcast a flaming protest against a system that was spawning a parasitic class of millionaires.

At the same time a remarkable increase in urban population was accompanied by a rapid elevation in urban standards of comfort. In comparison with this the farmers' lot was poor indeed. They came to believe that they were not receiving "a fair share of the fruits" of their toil, that their neighbors in other pursuits and occupations were "getting rich and living in comfort upon the profits" of the farmers' hard labor.⁸⁵ Thus the basic conviction of the Granger movement was revived and became the mainspring of the agrarian protest. The fundamental grievance of the farmers was what they believed to be the unequal and unjust distribution of wealth and income, so contrary to their theory of value which attributed all wealth to the creative labor of the "producing" masses.⁸⁶ So intimately linked with this that it was rarely disassociated from it in the rural mind was the conviction that the concentration of wealth in the cities and in the hands of a few was fundamentally inconsistent with the preservation of "free institutions."⁸⁷ The example of ancient Rome's decay after the futile reforms of the Gracchi brothers was ever present in the minds of

⁸³ C. F. Emerick, "An Analysis of Agricultural Discontent in the United States," *Political Science Quarterly*, 11:439 (New York, September 1896).

⁸⁴ John R. Commons, *The Distribution of Wealth* (New York, 1893), 252-253. Cf. *Farmers' Voice*, May 3, 1890; Ashby, *The Riddle of the Sphinx*, 229-230.

⁸⁵ Edward W. Bemis, "The Discontent of the Farmer," *Journal of Political Economy*, 1:193, 199, 200 (Chicago, March 1893); *New York Tribune*, quoted in *Farmers' Voice*, Oct. 6, 1894; *ibid.*, Feb. 25, 1888, Mar. 26, 1892; *Prairie Farmer*, Mar. 15, 1890; Ashby, *The Riddle of the Sphinx*, 388.

⁸⁶ *Western Rural*, 29:21 (Jan. 10, 1891); *National Economist*, 3:182 (June 7, 1890); *Prairie Farmer*, Dec. 28, 1889; *Farmers' Voice*, Feb. 25, 1888.

⁸⁷ William A. Peffer, "The Mission of the Populist Party," *North American Review*, 157:677 (New York, December 1893).

⁷⁹ R. M. Easley to Ignatius Donnelly, Jan. 6, 1891, in Donnelly MSS., Minnesota Historical Society; *Chicago Daily Tribune*, Apr. 23, 1890; *Western Rural*, 27:665 (Oct. 19, 1889); *Farmers' Voice*, Dec. 23, 1893.

⁸⁰ *Prairie Farmer*, Jan. 5, 1889.

⁸¹ *Ibid.*, Mar. 24, 1890, Jan. 17, 1891; *Western Rural*, 30:746 (Nov. 19, 1892); *Farmers' Voice*, Apr. 12, 1892.

⁸² *Ibid.*, Apr. 12, 1892.

⁸³ *Ibid.*, Dec. 1, 1888; T. D. Hinckley, "A Talk to Dakota Farmers," *National Economist*, 1:407 (Sept. 14, 1889).

⁸⁴ S. A. Kirkpatrick, State organizer of the Farmers' Alliance, in a circular to the farmers. *Prairie Farmer*, Oct. 5, 1889.

rural leaders possessed of a classical education. To such critics the rise of a "moneyed aristocracy" or "plutocracy" threatened to destroy democracy in America.⁸⁸ Many looked forward to the rise of an American "Caesar" if the economic and urban revolutions were not checked.

Finally, the frontier was gone. The swift crescendo of the westward movement had settled over 124,000,000 acres of western land from 1880 to 1888.⁸⁹ The approaching exhaustion of the public domain was discussed editorially in the *Chicago Tribune* from 1888 to 1892. Following the announcement by the Census Office that the frontier line had disappeared, it was widely but mistakenly assumed that the door of opportunity in the West was now shut in the face of a rural democracy exposed to all the ramifications of concentrating wealth and economic power.

Many must have responded as did "Private Joe" Fifer, veteran of the Grand Army of the Republic and Governor of Illinois:

The land in the West is all gone. The West has served as a great safety valve to the nation. But our population has increased so marvelously that there is no more West to go to. What in God's name is to become of us?⁹⁰

Thus succinctly was stated a thesis which a generation of disciples of Frederick Jackson Turner have exploited. His first investigations, it may be observed, began in Wisconsin during the popular discussion of the frontier's past influence in American life. Over a year after Governor Fifer voiced the safety-valve theory, Turner read his famous paper before the American Historical Association and founded a new school of national historiography as a scholarly byproduct of Midwestern agrarian unrest.

⁸⁸ A. J. Streeter, "The Farmers and the Railroads," *National Economist*, 1:19 (Mar. 30, 1889); Hubbard, *The Coming Climax in the Destinies of America*, 352-353; *Farmers' Voice*, July 6, 1889, May 3, 1890; *Western Rural*, 29: 21 (Jan. 10, 1891).

⁸⁹ *Chicago Daily Tribune*, May 27, 1889.

⁹⁰ Address to the farmers' convention of the Eighth Congressional District, Joliet, Illinois, Feb. 19, 1892, in *Chicago Daily Tribune*, Feb. 22, 1892. See Fred A. Shannon, "A Post Mortem on the Labor-Safety-Valve Theory," *Agricultural History*, 19: 31-37 (January 1945), for a definitive analysis of the validity of the safety-valve theory here expressed.

As for the discontented farmers, they turned with all the bitterness of despair upon the great private holdings. "Land monopoly" became one of the three great grievances of the resurgent agrarian crusade. In Illinois as in the trans-Missouri West the holdings of British capitalists and the railroads were especially denounced, although most of the Illinois Central land grant had passed into private hands. The Scully estate was bitterly attacked in the mid-eighties. Later, in 1893, considerable feeling developed against the large landlords whose estates dominated the rich agricultural counties in the corn belt of Illinois. The old resentment against speculators was now directed against the capitalists who had succeeded in engrossing the most fertile lands of the black prairies. By withholding these from the market and operating them as a permanent investment the rising landlord class blocked the "natural expansion" of the small-farmer regime and threatened it with extinction.⁹¹

Thus, there existed both tangible and psychological bases for agrarian unrest in Illinois, despite the agricultural revolution that sheltered all but the wheat-growing counties from the worst of the economic storm that blew over the Middle West with increasing force after 1889. In "Egypt" and the oats-growing counties to the north, however, indignation flared and the Alliance movement boomed as the binder-twine monopoly headed by the National Cordage Company announced a "lift" in prices of 50 percent.⁹² Then, as a renewed sense of grievances crystallized among the less prosperous grangers, the stage was set once more for a "farmers' election" such as had featured the first great epoch of the agrarian crusade. Because of the effects of the economic changes that had intervened, it was less acute than the protest of the early seventies, and was destined for expression largely through major party channels. Only in the counties of the south, where the storm struck wheat farms devoid of shelter from the competition of western prairies and the dry plains, was distress so great that it foreshadowed a significant break in party lines as the afflicted farmers sought relief.

⁹¹ *Ibid.*, Mar. 30, 1893; *Chicago Express*, Feb. 13, 1886; *Western Rural*, 24:88 (Feb. 6, 1886); Ashby, *The Riddle of the Sphinx*, 81-82; Hubbard, *The Coming Climax in the Destinies of America*, 257-258.

⁹² *Farmers' Voice*, Mar. 9, 30, Apr. 6, 1889.

PLANTATION LETTERS OF A SOUTHERN STATESMAN

JOHN SHARP WILLIAMS AND CEDAR GROVE

Edited by GEORGE C. OSBORN

Department of History, Memphis State College

John Sharp Williams, owner of Cedar Grove, a 3,000-acre plantation which was located in Yazoo County, Mississippi, drifted into politics during the Populist revolt of the 1890s. As a member of the United States House of Representatives for sixteen years, he served on important committees. Beginning in 1903 as Democratic minority leader, he brought order out of chaos, replaced pessimism with optimism, supplanted party discord with disciplined unity, and among the House Democrats substituted a progressive program of action for a plan of passive negation.

Later, Williams served two terms in the United States Senate with distinction. As a leader in the inner councils of his party he aided appreciably in the Wilsonian economic reformation. From May 1915, he championed America's entrance into the World War, not just to enter another war, essentially European, but as "a war to end all wars." After the downfall of his and Woodrow Wilson's idealism in 1919 when the United States Senate defeated the motion to join the League of Nations, he became cynical, refused to seek reelection in 1922, and retired to his ancestral plantation home to spend his last years in the quiet and solace of his fruitful acres.¹

Despite the rush and stir of officialdom, Williams never became an addict of urban life. The following letters from the John Sharp Williams Collection at Cedar Grove Plantation reveal that he kept a meticulous interest in the farming activities back home. Because of the sound detailed advice which flowed from the Senator to his son, the latter eventually made a remarkable success as a planter at Cedar Grove. Many of the problems, such as labor, crop rotation, soil improvement, finances, livestock production, and marketing that confronted an inexperienced but determined young

Mississippi farmer over a quarter of a century ago are discussed in these letters.

THE LETTERS

United States Senate

Washington, D. C.
January 14, 1913

Mr. John S. Williams, Jr.,²
R. F. D. No. 1,
Benton, Mississippi.

Dear John:

Of course, you can't keep the negroes from leaving. I reckon they are pretty well discouraged by the boll weevil. The more of them that leave, the better in the remote future, however hard it may work now.

As to working a big wages squad; that depends upon whether you can remain in service over them on horseback from sunrise until sunset. Get them out of the beds by day-break and have them at work by sunrise. If you can't do that, there is no money in it.

You will have to leave Pauline to do the nursing until some of us get home to help her.³

If you have a wages squad, of course you must have the right sort of farming tools and you must have double teams. I would have them of mares, and work each team of mares a half day at a time, and turn them loose on the pasture for the balance of the day, except in the winter, when I would put them up; and then go out and substitute for the two mares that I had turned loose two mares that

² John Sharp Williams, Jr., was the second son and fourth child of John Sharp Williams and Betty Dial Webb Williams. Senator and Mrs. Williams were the parents of eight children. Seven of them lived to maturity. The Senator often complained jokingly that he had the Southerner's disease of "too many children and too few dollars."

³ Pauline Webb Williams was the wife of John Sharp Williams, Jr. They had one child, Pauline, who was an infant in 1913.

¹ See George C. Osborn, *John Sharp Williams, Planter-Statesman of the Deep South* (Baton Rouge, 1943), for a detailed study of Williams' life.

I would feed for dinner ready for the afternoon work.

Keep the seven tenants that you have. I guess that by process of elimination they are about all you ought to have. I don't think that I would have hired nine men. Six would have been enough. But if you have hired them, let it go at that.

Your \$2,000 ought to run you for quite a while. Then I can begin to help you out of my salary. If your month's expenses are \$150; the \$2,000 will last you a little over 12 months.

I enclose a check for \$236, enough to buy your tools and pay your servants for 3 months at \$12.00 per month.

I will stand behind you to the tune of \$1,000 during the year. That will leave after this check \$764. I prefer to send it to you a little each month, when you begin to need it.

Of course, you mustn't give up the idea of being a good farmer. I wish I could get Webb and Kit into the idea that they wanted to be good farmers.⁴ Farming is the best business in the world, the highest order of business, the most honest occupation, and all that.

Will you have to buy any more mares?

How does it happen that you only have 11 head of cows?

Papa⁵

Cedar Grove Farm
February 8, 1913

My dear Papa

I received your letter and enclosed check for which I thank you. I am very hard at work now from morn till night and have got about 80 acres in beautiful fix for planting corn.

I have a good working force and am working them hard.

I bought 600 bushels of excellent corn from Mr. Ed. Brister,⁶ when his things were sold, for 55¢ per bushel. This will give me plenty to grind all of the meal for the place and have about half left to sell at a good profit in spring as corn is going up [in price].

One thing that worries me and that is I can't get all my mares with fold [sic] and they are the very

⁴ Robert Webb Williams was the second child of Senator and Mrs. Williams. Christopher Harris Williams was their eighth child and fourth son.

⁵ John Sharp Williams, United States Senator from Mississippi.

⁶ Edward Brister was a neighbor who lived 3 miles east of Cedar Grove Plantation.

good mares that had colts last year so I know that they will breed. I wrote the Prog[ressive] Farmer about it and they said perhaps the stallion hadn't the proper food or hadn't enough exercise,⁷ so I have changed [his] feed as they recom[mended] and I believe the horse has plenty of exercise as I ride him a good bit.

Pauline and the baby are both well and the baby is just as pretty and sweet as she can be and so is Pauline.

I am so anxious to make a good crop this year and I somehow believe that I will both of cotton and corn.

I am sub-soiling all my land this year to the depth of 12 inches.

Have to go now so will close.

With bushels of love to you and Mama.

John

United States Senate
Washington, D. C.
February 13, 1913

Mr. John S. Williams, Jr.

R. F. D. No. 1,

Benton, Mississippi.

Dear John,

.... You positively must make this the last year of your life when you buy corn. There is no excuse for it. No good farmer, no matter what the weather is, buys corn.

The reason why you can't get your mares in foal is because you bought a lot of Western mares from horse traders, who collected barren mares to sell. I warned you that that was apt to be the case at the time. Those fellows up in the North West breed horses, and whenever they have tried a mare several times and she doesn't breed, they sell her to a horse trader who sells her to you for breeding purposes. No horse trader will warrant a mare to breed, you know. Of course, where mares have had colts already and you know it, then the cause of their not having colts again is further to see. Perhaps they had too much corn and too little oats and grass. Perhaps they had miscarriages caused by not being in good physical condition after going to the stallion. In that case you can overcome the trouble.

Don't get discouraged. Keep right on ham-

⁷ The *Progressive Farmer* was a farm periodical which was published in sectional editions at Birmingham, Memphis, and Raleigh. The managing editor was E. E. Miller.

mering at the work. Above all things don't put in over five, or at the very utmost six acres of cotton to the mule. Turn any tenant . . . off the place who doesn't obey you about that. Plant it as early as you reasonable can. Force it by cultivation and by fertilizers. If you get your cotton to fruiting before the boll weevil gets to work, you are all right; if you don't, you are all gone.

Your idea of running a sub-soil plow to the depth of 12 inches is a fine one.

John Sharp Williams

United States Senate

Washington, D. C.

April 24, 1913

Mrs. John S. Williams

Dear Betty:

....
I wish I could be with you and Sharp and the roses—*especially the roses!*⁸

Your husband,
John Sharp Williams

Cedar Grove Plantation

April 25, 1913

My dear Papa:

.... I am working hard and trying somehow to work out of this mess that the [boll] weevils have got us into.

I have got a splendid wage squad and am getting great work done between rains, but there looks like there will be no end of rain and cold days, the cotton looks bad but the corn looks fine so far and I have a splendid stand nearly everywhere.

I only planted 25 acres with wage hands and I am glad of it, some people are plow ing up cotton now and planting corn because it looks so bad.

I have about 200 acres of corn up and worked out once and about 50 more acres in the bottom that [I] can't plant yet on account of water but will get it in late.

I am working exactly according to government methods and so far have kept the grass down fine and the crop growing.

I'm making a big section harrow do a lot of work in corn where it is planted on the level and it works like a miracle.

....

I am aiming at eight or ten bales of cotton and

⁸ Sharp was Mary Sharp Williams, the first born of Senator and Mrs. Williams. In 1913 she was the wife of Edwin R. Holmes.

5,000 bushels with wage squad and am going to make the corn, anyhow if some corn ear weevils don't turn up the last moment [and eat the corn up]; because I have prepared and am cultivating to beat the dry spell no matter how bad it comes later.

I didn't tell you that I sold in January, three colts, that we raised, for \$405 which was a good price as they were barely three years old and unbroken except to plow, so you see they helped out a good bit.

Our cows have never brought us anything to amount to anything but we are getting rid of ticks fast and as soon as we are good rid of them, the cows will begin to pay; of course they have furnished us with milk and butter and I have sold four or five little bull calves.

I have close to 100 head of hogs and pigs and if they continue to thrive I can ship more next winter.

John

United States Senate

Washington, D. C.

June 9, 1913

Mr. John S. Williams, Jr.

Cedar Grove Farm

Benton, Mississippi.

Dear John

....
Learn how to make good corn. Never rest satisfied until your average is 40 bu. to the acre. Then you can feel like you are doing something. Get plenty of hay for your stock during the winter and plenty of corn for your horses and the balance of it will come out all right.

With much love,
John Sharp Williams

United States Senate

Washington, D. C.

July 11, 1913

Mr. John S. Williams, Jr.

R. F. D. No. 1,

Benton, Mississippi.

Dear John:

I got your letter of June 19th; kept carrying it around in my pocket thinking I would get time to answer it. I am glad you got a receipt from the insurance man. I will take care of your insurance for Pauline and the baby until you are on your feet all right. You ought to get a pretty good price for your hay this year. As for the dry weather, my observation, all my life, has been that it scares people and wet weather ruins them.

I wish, too, that I could see little Pauline. I have got two grandchildren now that I have never looked at except in a photograph.

I hope that my other daughter will enjoy her stay in Texas and that she and her mother will enjoy their stay at Cedar Grove when they return.⁹

Julia writes that she is picking up flesh,¹⁰ and that Sharp is getting to look better.

John Sharp Williams

Cedar Grove Plantation
July 14, 1913

Dear Papa—

Pauline and the baby are back and the baby is as fat as can be but Pauline is rather thin.

The dry weather has damaged corn some but mine hasn't suffered a great deal on account of the way it was worked. I at last have a good corn crop, but the cotton is small and the boll weevils are bad in spite of doing everything possible to destroy them. Will make a good pea crop and the calves and colts look very well.

I just received my bank statement and find that I am \$25 (twenty-five dollars) overdrawn. Have spent as little as I could all year.

Please send me a check for the balance of the \$1000.00 or if you had rather just send three hundred now and three hundred on the 1st of September so I can use it getting corn pulled, peas picked, etc.

I know you think there will be no end of my needing more money but I am going to succeed and some day pay you for all your goodness to me and mine. I have had a hard row the last two years to make anything pay off.

The land or most of the land is so badly washed that it will not produce a paying crop, especially with these weevils.

In fact the whole upper half of the place should be in cattle pasture with about 150 head of cows on it, the calves at the present price would undoubtedly pay big interest on the money invested and the land would soon be good land. The lower half of the place is in much better condition and can be brought back by rotation of crops and good cultivation.

Give my love to all the folks, I do hope you all will get home this summer. I want to take you all over the place and tell you just what I think

⁹ "My other daughter" was Pauline Webb Williams, the wife of John S. Williams, Jr. She was reared at Bryan, Texas. Her mother was Mrs. Walter B. Webb.

¹⁰ Julia Fulton Williams was the fifth child of Senator and Mrs. Williams.

ought to be done in each part with the land and I believe if you could see just the conditions you would agree with me.

Lots of love to all,
J. S. Williams, Jr.

United States Senate
Washington, D. C.
July 17, 1913

Mr. John S. Williams, Jr.,
R. F. D. No. 1,
Benton, Mississippi.

Dear John:

I am just reading your letter of July 14th. I enclose you my check for \$300. Will send you another check about the 1st of September. Write me a little before the 1st to remind me.

I think you are right about keeping as many cattle upon your land as possible, but just turning cattle loose upon a pasture don't enrich the land much; the manure dries up and becomes of no avail. You ought to keep your cattle, in the winter time, up by the barn and feed them—give them plenty of hay at any rate, and then let them run on the pastures in the day time and get what they can; let them eat hay at night. By doing this you will collect a great amount of manure, and gradually enrich the land to its old capacity.

Give my love to Pauline and the baby, and keep a good large share for yourself.

John Sharp Williams

Cedar Grove Plantation
August 18, 1913

Dear Papa—

I just received statement from Lamar Life Insurance Company at Jackson [Mississippi] saying that my premium of \$48.10 (forty-eight dollars and ten cents is due). You said in your last letter that you would take care of this for me.

I was afraid I wouldn't have time to write you, so I told Uncle Kit that I would overdraw to about that amount and get you to send me check to cover it.¹¹

Everything here looks pretty well and I believe we are going to do a good deal better than we did last year and will have between two and three thousand bushels of corn to sell, that's better than buying. The cotton stalk is not large this year but is well fruited, the pea crop was cut off some by

¹¹ Christopher Harris Williams was the younger brother of Senator Williams and president of the Bank of Yazoo City.

dry weather but still we will make a pretty good crop. The hogs are getting in good fix and will be ready for market in last of October.

Give my love to everybody and tell them all they just ought to see this baby. Lots of love.

J. S. Williams, Jr.

United States Senate
Washington, D. C.
August 22, 1913

Mr. John Sharp Williams, Jr.

R. F. D. No. 1,
Benton, Mississippi.

Dear John:

Just received your letter of the 18th. Enclosed please find my check for \$48.10, with which to pay premium in the Lamar Life Insurance Company. You may endorse this over to the bank of Yazoo City and that will cover your overdraft.

Corn is pretty high right now. Maybe you can sell off the corn in the ear pretty easily. Perhaps you will have to shell it and sack it, but make a good sale. I would put as much away in hogs as I could and sell the hogs on their feet. However, you are on the ground and know better what to do than I do from here.

My general idea is that the best thing to do with hay and corn, an average year, is to put them in the stomachs of cattle and hogs and sell them, as you have plenty of hay, and I would buy some cattle if I were you when they are cheap in the fall and early winter, and feed them up.

You ought to be trying to find a market for your hogs now, and see if, with other people, you can not make up a car-load lot. Find out what constitutes a car-load lot—how many head—and about the best market and ship them to that point. Is that packery down at Natchez [Mississippi] still in operation? It is a roundabout way to get there but may get a better rate than by way of Memphis [Tennessee]. But all that you can look into. I dictate this letter hurriedly.

Give my love to Pauline and kiss the baby for me.

John Sharp Williams

United States Senate
Washington, D. C.
August 22, 1913

Mrs. Pauline Webb Williams,

R. F. D. No. 1,
Benton, Mississippi.

My Dear Other Daughter:

I got your letter of the 13th, which I am just reading as I am pretty far behind in my mail and

hardly hope to ever catch up again as long as this congress goes on. I ought to sit down and write you a personal letter in my own personal handwriting, of course, but I thought you would rather hear from me this way than not at all.

I am glad to know that your Mother and Nobie have got back home and I hope they are still with you and making it pleasant for you.¹² I have seen notices in the newspapers of pleasant rains and I suppose you got your share of them.

I have received a letter from John since the date of your letter. He seems to be in very good spirits and hopeful. Tell him he had better begin to bale the hay as soon as he can so that he can sell some of it.

I agree with you—it looks to me as if I were here for life. I wish the family had stayed with you and John [at Cedar Grove]. We could have saved some money if we had done that. Current expenses here cost me more than my salary [as a United States Senator].

John Sharp Williams

United States Senate
Washington, D. C.
September 10, 1913

Mrs. John S. Williams, Jr.

R. F. D. No. 1,
Benton, Mississippi.

My dear "Other Daughter":

....

I think it is about time John was buying a few sheep—or perhaps it would be better if he would buy a few Angora goats and turn them into that woods lot up there and let them eat down the undergrowth. They say the meat of the Angora goat is better than mutton, but I don't know—I never ate any of it.

Love to all,
John Sharp Williams

United States Senate
Washington, D. C.
October 8, 1913

Mrs. John S. Williams, Jr.

R. F. D. No. 1,
Benton, Mississippi.

Dear Pauline:

I have ordered a box of bulbs—tulips and narcissi—to be sent to you from the Department of Agriculture. I think the best place to plant them would be upon the graves out in the [family grave]

¹² Nobie was a maid who accompanied Mrs. Walter B. Webb on her travels.

yard. The cultivation of the bulbs and flowers will keep the graves nice and clean. People have a habit of putting flowers on graves. I think it is a prettier idea to grow them there, as they are symbolic every spring of rebirth in another life. I hope the bulbs that I planted on the graves before did well. Tell John to get good rich ground from the old bottom, or somewhere, with plenty of leaf-mold, when he goes to plant them. They would be very pretty if they were properly attended to and would be a source of a great deal of pleasure to us all. It would be pretty if you would put a few tulips in the center of each grave not hitherto planted and surround them with the narcissi.

Hurriedly,
John Sharp Williams

Cedar Grove Plantation
October 30, 1913

Dear Papa,

....

I shipped 60 head of hogs on the 15th for which I received net after all expenses of shipping were paid \$590.80. I sold a colt not a year old for \$100, this is all I have sold so far. My pea and corn crop was good and [I] will have a good many bushels of each to sell. My cotton crop was very bad and the rains damaged what we made. . . .

I have four two and three year old colts to sell but have been unable to get a fair price so far for them.

.... I sold Glen Oak and bought a larger and a better coach stallion.¹³ He is beautiful and is getting something to do and is folding [sic] the mares fine. . . . I got my money back on Glen Oak and put \$140 with it to pay for the new horse. . . . He is a four year old, weight about 1400 # and is gentle and easy to manage, plenty of life, good action and fairly good speed.

Love
John

November 4, 1913
Cedar Grove Farm

Dear Papa:

I had a piece of bad luck this morning. One of my best mares, that I had just succeeded in getting with fold [sic], looked like something was wrong with her when she started to the field and so I had her turned back in the lot, she would lay down

¹³ Glen Oak was a registered stallion purchased by John S. Williams, Jr. for breeding purposes.

and get up. I thought it was just a little colic and went to get some oil for her and when I got back she had taken the blind staggers and [had] run in the pond and drowned herself.

It worries and discourages me because since I have been out here I have had several mares taken the same way and can't account for it, and therefore don't know what to do to prevent it.

It makes the colt raising business a failure instead of a success as it should be. I don't lose any colts and raise them for less than I can sell them for, but every year I lose one or two good mares while they are with fold [sic] and of course that makes a failure of the whole colt business. I hardly know what to do.

I never had a sick horse except a mare that is with fold [sic] and then in spite of all caution, if they are worked at all, they will get sick every now and then. I think wage hands are too rough with them when I am not there but I can't catch one of them at it. I would like to sell my mares, except four, to good tenants, and let them raise the colts and use the mules in the wage squad. The negroes that work their mares themselves never lose one somehow. Please write me what you think and I will do as you say, either still try it with the mares in the wage squad and do my best, or, as I say, sell the mares to good tenants and in that way start them to raising colts. . . .

John

United States Senate
Washington, D. C.
November 8, 1913

John S. Williams, Jr.
R. F. D. No. 1,
Benton, Mississippi.

Dear John:

I do not think I would sell the mares. I would continue to try to keep them and to raise colts. Keep your eyes open and try to find out just what is the matter and try to prevent it in the future!

I would not work a mare with a foal a whole day at a time; I believe I told you that though long, long ago. I would have enough of them to work one in the forenoon and one in the afternoon, especially if they are mares that have come down from the north. You will have to watch your wages squad men better to see that they never abuse the stock. I would not work the mares at all when they are late in foal. I think there is money in

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cattle; more than in horses, but there is some in horses, too, and I should keep both.

John Sharp Williams

United States Senate
Washington, D. C.
November 13, 1913

Mrs. John S. Williams, Jr.,
R. F. D. No. 1,
Benton, Mississippi.

Dear Pauline:

I got yours of November 4th. I am glad that you got the box of bulbs. Hope that by now the weather has given you a chance to plant them, and that they will come up and look pretty.

You talk about John's hands being busy. Where is old Lawrence?¹⁴ Has he left you?

By the way, how are the pomegranates coming out, and the figs? I put out a good many figs and five or six pomegranates, I believe.

John wrote me about the good luck he had in selling the hogs. He will be all right after while, just as soon as he learns business and how to attend to it closely.

I shall serve as your attorney and John shall not have a dollar for feeding your pigs. Then I will charge you a fee when I come home in the shape of a roast pig every now and then.

I thought maybe I would have a chance to come down and spend Christmas with you and John, but I do not think I shall now. I am getting so tired of Washington that the very air tastes bad in my mouth.

I am not like your people in Texas—I want to see not only the baby, but you and John. I am all the more anxious to see the baby because the baby won't talk. That is not a female trait you know!

Kiss the whole family for me and tell them to kiss you back.

John Sharp Williams

United States Senate
Washington, D. C.
December 20, 1913

Mr. John Sharp Williams, Jr.,
R. F. D. No. 1,
Benton, Mississippi.

Dear John:

Will you be at home Christmas? If you are going to Texas when are you going? Wire me immediately upon receipt of this letter. I think

¹⁴ Lawrence was an old Negro who was born a slave and grew up as a playmate of John Sharp Williams.

possibly I might come and talk over the situation with you. I find it right hard to answer your letter without further information than you have previously given me about the actual condition of things on the place.

John Sharp Williams

Cedar Grove Plantation
February 13, 1914

Dear Papa

... I find that the Guion place joins us for about 150 yards at the back of the field I bought from Berry.¹⁵ I also find that there is enough barb wire on the place to completely fence the place if not a little more. There are 10 cabins and only 1 any good at all for a cabin but of course there is [*sic*] some good logs and lumber in each of them. I also found about 1½ miles of hog wire, a good orchard (if looked after a little) of about 60 or 70 trees, peach, apple, plum and pear and also in another place where Guion first lived some splendid figs. Outside of the bottoms the land is very poor.

Now my idea is to throw a fence around the place and also take in with that fence the poorest part of the Hudson field and the poor ridge, that I have just turned out this year where Jack Powell and Robert Little and Uncle Mark were...¹⁶ This would make in all about 700 acres under that fence. Then put the cattle shed in the field I have been talking about... I believe I can do the fencing and build the shed, by using the wire already there scattered all over the place and using the old cabins or the best timber in the old cabins, getting the big corner posts out of the woods and getting out shingles to cover shed on the \$500 and buy cattle on, you say, with the \$2,000...

Of course the pasture at first would be too big for the cattle that we could start with, but by saving all the heifers we could in a few years have a herd of 3 or 400 and then there would be a paying business no matter how much or how little it rained or how many boll weevils came. In the meantime the manure from the sheds would be hauled and scattered and the land used as pasture would be improving. I think a small stave silo would also pay and one can be bought for about

¹⁵ John Guion owned an adjoining farm of a few hundred acres. Christopher Berry was another neighbor and farmer.

¹⁶ George Hudson, Jack Powell, Robert Little, and "Uncle" Mark Thomas were tenants.

\$150 or \$200 so if permissible I would make the \$500 stretch to include that too.

My idea would be to take my time about the shed or barn and the silo, just so I got them ready for next winter. The silo could be filled with a crop of Mexican June corn to follow oats that I have [planted] in the big bottom [field]. Nearly any quantity of hay can be cut on the Guion place and stored.

I could have only one man on that place and he would be a good negro [tenant] to look after the fruit orchard over there just to have somebody in the house so it wouldn't go to pieces. . . . [I would] give the negro enough land to make a small crop, for looking after things and keeping [the] fence up. . . .

I believe that in grading up a herd as large as our plan covers that a bull of one of the pure beef herds (either Shorthorn or Hereford) should be used as calves will be sold for beef and will grow faster.

I have every house on the place now with a good roof on it and nearly every house has a ceiling. I have had to cover five houses this year. This year I will have fifteen share hands and renters and one or two wage hands. I sold three horse colts [each of which] was nearly four years old, to tenants to work as I couldn't get what I thought they were worth each. I have got all my best hands rented or worked for shares and at last have gotten all the land that was in pasture or laying out in cultivation. The poor ridge on the west side of the place is also rented. I had to move one cabin and practically build one over, besides other repairing, but now the place for this one year will have good cabins and the land arranged right or rather nearly right. Two of the negroes have pretty far to go to their land but they have got good land when they get there. If my cattle plan goes through there will be no waste land, every acre except a few acres of woods on the other road where the place points across that creek will be either worked or pastured. . . . I am going to succeed here, you just be patient while I am getting adapted to the country and conditions and remember that I was practically never in the country until I came here and didn't know how to make use of what little I did know and that was so little that I might call it nothing.

I hurt myself too by thinking that I knew so much more than I did know then or for that matter now.

I then, too, struck conditions under which men that have been farming successfully all their lives are failing. So I can say that for myself although I know I should have done better. I think all of the Stubblefields are trying to sell out,¹⁷ and quit farming and a great many people are doing or trying to do the same thing. . . .

John Sharp Williams, Jr.

United States Senate

Washington, D. C.
February 19, 1914

Mr. John S. Williams, Jr.

R. F. D. No. 1,

Benton, Mississippi.

Dear John:

Have just got your letter of the 13th. I do not know how it was so blessed long in getting here. I notice, however, since saying this that it is post-marked the 16th; you must have carried it three days before you mailed it.

I am not there and I can't look at the land and I can't undertake to form a judgment upon it. Go ahead and exercise your discretion to the best of your ability, except that you don't go outside of the limits which I have laid down.

The John Guion residence ought to be a very good house; it was the last time I was in it, and you ought to be able to rent it, with some 40 or 50 acres of land, to some white man who would be good for the rent, or to some negro who would be good for it, independently of the crop, or even some good man who would be absolutely good for it, that is the crop, whether he made much cotton or not. If you did that, that plot of land might be fenced off separately to itself, so that whoever took that little forty, fifty or sixty acre-farm might get out the posts and do the work and you furnish the wire.

I would not bother with the silo now; it is time enough for that next fall, or next summer at any rate. By that time you will see better where you are coming out [financially]—But if you can crowd it in so as to make the \$500 cover the fencing and the silo both, I have no objection.

I think you are wise in taking your time about the cow shed and silo, but have them ready next winter. Above all things have the cow shed ready by next winter. Giving the cows shelter saves

¹⁷ Earl Stubblefield and his large family were neighbors and farmers.

¹⁸ Edwin Williams at

many a pound of food and helps to have the cattle ready for market so much earlier.

Meanwhile do not be taking any jurisdiction over the Guion place until we get it. It is possible that somebody may buy it in for enough to pay what [John] Guion owes me; if so I shall be very glad indeed not to be bothered with the place at all. I would not spend any money on it nor make any contracts involving the expenditure of money upon it until the foreclosure is had.

I do not think you can expect much from an orchard as far off as the Guion place. If the trees would bear transplanting up near your own home all right. Those of them too old to bear transplanting you would have to leave where they are and take the chance of getting the fruit—a small chance, I should say, still a tolerable good one if you had a good man in charge who promised to take care of it, especially if you gave him half the fruit for doing it. But with the orchard, as with the balance of the Guion place, make no arrangement until the place falls to us; it don't [*sic*] belong to us yet.

By all means the Guion house must have somebody in it. I have written to Edwin Holmes to arrange about the insurance;¹⁸ otherwise anybody who dropped a match in the long sedge grass might burn the whole thing up.

What is the matter with the bull you keep, does he fail to get calves? Do you think you will have too many heifers for him? If both the above questions are answered in the negative I do not see why you want to buy another bull. I think the red poll is a very good beef cow, just about as good as the short horn.

The more share hands and the more renters you get the worse off you will be unless you do what I told you to do long ago: Don't under any circumstances permit any negro to put in over six acres of cotton to the mule. It would be better still not to let them put over four, making the manure and fertilizing the land. Get the commercial fertilizer if necessary; work it like the devil and work it as fast as it can be worked and get the cotton boll too tough for the boll weevil to eat by the time the boll weevil comes. Now, John, that is all there is to that proposition; I have looked into it thoroughly.

Then you must have put the balance of their energies and the balance of their lands in the production of other crops.

¹⁸ Edwin Holmes was the husband of Mary Sharp Williams and the son-in-law of Senator Williams.

If you don't pursue this policy or something very much like it, the more cabins you have got full of negroes the worse off you are going to be. It won't help because of the fact that you might sell horses and mules to the tenants because if the tenants undertake to make cotton under boll weevil conditions in the wrong way they won't make enough to pay for the horses and mules, and it would amount to your giving them the horses and mules, or lending them to them, which is the same thing.

You have got the right sow by the ear whenever you think of increasing your stock of horses and cattle, and your stock of hay and pasturage, and whenever your main object is to enrich the land by the manure from the livestock, and whenever you are trying to get rid of the cattle tick; but the minute you give away to the idea that you can raise cotton on any considerable amount of land to the mule under boll weevil conditions that minute you are hurting your pocket-book.

I think you have done very well considering all the conditions. You are a boy who has to learn by hard licks and who does not take it by instruction from other people. Just go right on learning and I am going to stand by you to any reasonable extent.

Never mind about other people getting discouraged and selling out. You remember that I told Earl Stubblefield and other boys if they would not adapt themselves to boll weevil conditions they had better quit. If Mississippi could not raise one pound of cotton it would still be a good farming country provided the farmers would build up the land, and that is mainly to be done by keeping cattle and putting manure upon it.

Cedar Grove Farm
Feb[ruary] 28, 1914

Dear Papa.

I have put off writing because I couldn't tell exactly how I would stand until I got through with improvements and changes that I have had to make.

I had to cover seven of the houses this year and ceil a good many in order to save the houses and get the right sort of labor. I had to move one house, clean up and drain a whole lot of good land to take the place of poor land put into pasture. I had to practically build one house over or the roof had fallen in and the sides were rotten, all of this together with buying good cotton seed for the place, [with buying] two mules for two negroes that lost their horses from old age and furnishing

clothes and shoes for winter and allowances to negroes for February and March, has taken nearly all that came out of the crops. Of course we have lived out of it too but have used mighty little for ourselves.

I think I have about 800 bushels of corn more than I will need but am afraid to sell too close because my hogs are increasing and growing and some of the negroes that moved here this year will need some corn later. I had rather not sell any more corn until I can see the next crop in sight. I have a good stand of oats but can't depend on the yield until they are gathered in June.

I got plenty to run this year out of the crop as I had not used so much in fixing up the place but I felt like the time had come when I couldn't put off fixing any longer.

What I want most is \$225 the first of April, May, June, July, and August at 6% interest from the time I get it until December 1, 1914.

I know it is not fair to you or the others to ask you to put out any more money here except just as a loan for a stated time drawing interest, so [I] want the money on the terms [which] I have cited. I am better fixed to farm in every respect than I have been before; better labor, better land in cultivation and better knowledge of what to do.

I know I can pay this money on the first of December because I have at last got the place where what comes out of the crop won't have to go back on the place.

If you can let me have this money this way please enclose a letter to the Bank or to Uncle Kit telling them to put the \$225 to the account of Cedar Grove Farm the first of each of the months of April, May, June, July, and August.¹⁹

With love and gratitude for the trust in me expressed in your last letter. I love the place and the business and must and will succeed.

J. S. Williams Jr.

United States Senate
Washington, D. C.
March 5, 1914.

¹⁹ The Bank of Yazoo City of which Uncle Christopher H. Williams was president.

Mr. John S. Williams, Jr.,

R. F. D. No. 1,

Benton, Mississippi.

Dear John:

I am just reading yours of February 28th. You are right about not selling the corn down too close; better put it in hogs and sell the hogs. The right way to sell corn generally is to sell it on foot.

You tell me that you want \$225 on the 1st of April, May, June, July, and August, each month, at 6 per cent interest from the time you get it until you pay it back. I do not propose to lend you any money and I do not propose for you to go into debt to me or anybody else. What I proposed to give you was to be given you in the joint venture until things got upon the proper footing, when you will pay me half the profits. I want to see you put upon your feet definitely, properly and without any indebtedness. The partnership—if you call it such, is not legally such, but calling it that for the sake of description—could pay me back the interest upon the money furnished if we think it wise later on.

I have already written to you once before that I would let you have \$2500 this year. This is more than the \$225 for the five months which you are now asking. I thought when you wrote before that what you wanted was money to make the improvements with in the way of barns, cowsheds, fences, and so forth. You can use it in the way best adapted for the place. I have already written to your Uncle Kit telling him to let you have \$2500 on the two accounts, to wit, \$2,000 for buying cattle, and \$500 for cow sheds, fencing and so forth.

If you mean by your last letter that you want \$225 a month for five months in addition to that \$2500, I cannot let you have it. All I can possibly let you have this year is the \$2500.

Answer this letter as soon as you get it so that I may understand whether you want any part of the \$2500 for anything else except purchasing cattle and fencing and cow sheds, if so I will have to change the form of my instructions to the Bank of Yazoo City.

I dictate rather hurriedly. Give my love to Pauline and the baby and keep a good share of it for yourself.

John Sharp Williams

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NEWS NOTES AND COMMENTS

THE 1946 ANNUAL MEETING

The Agricultural History Society held its 1946 annual meeting in the Conference Room of the National Archives in Washington, D. C., on October 7 at 8:00 p.m. Mr. Charles J. Brand, the Society's president, presided.

Mr. Brand and others reported on the efforts to increase the Society's membership during the preceding year. The editor of *Agricultural History* then commented on his report which had been mailed to the membership.

It was voted to transfer \$1,000 from the checking account to the Society's capital fund. This action was made possible by the unusually active sale of back numbers.

The results of the balloting for officers for 1946-47 was announced as follows: president, Earle D. Ross; vice president, H. L. Walster; secretary-treasurer, Charles A. Burmeister; executive committee, Lewis E. Atherton and H. C. Mason. Attention was called to the fact that Mr. Mason, a Canadian, was the first person not a citizen of the United States to be nominated and elected as an officer of the Society. It was also noted that the number of ballots returned was about three times larger than it had been for a number of years. The ballot submitted to the membership was prepared by a nominating committee consisting of Arthur G. Peterson (chairman), Arthur H. Cole, and E. Merton Coulter and carried three nominations for the offices of president and vice president, one for secretary-treasurer, and six for the two elected positions on the executive committee.

A proposal that the Society shall have honorary members had been submitted to the membership on July 15. On the ballots returned, 65 members registered their approval, 3 opposed, and 7 indicated no preference. After considerable discussion, the meeting amended the last sentence of Article III of the Constitution to read: "Membership in this Society shall be of six classes: Patron, life, honorary, contributing, regular, and student." It was then voted to add a section to Article I of the Bylaws stating that the number of honorary memberships shall be limited to a total of not more than ten and that not more than two may be elected in one year. Authorization was then voted for the president to appoint a committee of five to formulate criteria for selecting honorary members and methods for implementing their selection and reporting a program of procedure to the executive committee.

The proposal that the Society shall make annual awards for distinguished research and writing in the field of agricultural history which had been submitted

to the membership on July 15 was approved by 68 members and disapproved by 2. The meeting authorized the president to appoint a committee of five members to set up criteria, policies, and programs on awards to report to the executive committee.

In view of the action taken by the executive committee in raising the annual membership dues of the Society to \$4.00, the meeting voted to increase the joint membership dues with the Economic History Association to \$6.00 and to suspend the sale of life memberships according to the age formula.

Mr. Brand outlined the presidential address which illness had prevented his completing and stated that it would be printed in *Agricultural History*.

ANNUAL AWARDS

Among the comments concerning the suggestion that the Society shall make annual awards for outstanding books and articles in the field of agricultural history are the following:

Herbert O. Brayer: "Why not, in lieu of cash awards, do something like is done . . . in Europe? Let the awards carry the official title, 'Fellow, Agricultural History Society'—F.A.H.S. Surely that honor is not a small one, and if judiciously awarded we could get away from iniquitous money awards that really mean little unless they are large enough to finance additional research or publish studies."

Solon J. Buck: "I favor the appointment of a committee to look into this and make recommendations as to policy."

E. Merton Coulter: "Not to be awarded in any year when a high standard does not appear to have been met."

James Eckman: "A certificate would be inexpensive enough to conserve the Society's straitened funds and probably would be preserved by the recipient as long as any other symbol of the award."

Paul W. Gates: "The idea of an award for the best articles or books in the field is excellent."

Marshall Harris: "I think this an excellent idea. A medal or certificate, in time, would be more appropriate than cash. It has lasting value. I'd favor a nice certificate suitable for framing."

William D. Hoyt, Jr.: "I believe that annual awards for outstanding books and articles serve to stimulate research and writing. Ideally, there would be such awards in every field of history, and in making awards in the field of agricultural history, the Society would be taking a worthwhile step forward."

Mary G. Lacy: "I think the publicity which always accompanies such awards would advertise the Agricultural History Society and might increase both the

membership and the interest of those who are now inactive members."

Thomas J. Mayock: "I suggest that a 5-year subscription to the journal be given with the award and that efforts be made to endow the award."

Lois Olson: "I like the idea of an award but would like further discussion of its form before voting."

Wayne D. Rasmussen: "A medal award should not be too expensive. I suggest that one award be made per year and that the award be made in alternate years for the best book and the best article published in the preceding two years. Thus, a medal could be awarded in 1947 for the best article published in 1945-1946 and another in 1948 for the best book published in 1946-1947."

Theodore Saloutos: "I think such an award would provide some incentive. I also think that it should be either a monetary award or some classic work or works dealing with some phase of agricultural history."

Nannie M. Tilley: "Why worry about money? Perhaps the award in itself can come to mean something. Furthermore, it might not be appropriate for agricultural historians to put themselves on a par with historians, politics, industry, money makers, etc.—that is with reference to income."

J. Allen Tower: "An excellent idea. It should be confined, I believe, to *New World Agriculture* and be in the form of a citation to be published in the journal, with an inscribed copy to the recipient. It could also be used for New World students of agriculture in other areas. I doubt that it would be wise to attempt to cover the world, though I may be wrong on this matter."

Marjorie F. Warner: "Personally I believe the importance of such awards lies in the citation rather than a material consideration. I suppose that if the AHS were sufficiently endowed, it might be proper to make grants for carrying on distinguished work. That being impossible, it seems to me a simple citation, which should be as widely publicized as possible, would be stimulating and gratifying to investigators in this field."

Edward N. Wentworth: "Like idea of book award and article award. Engrossed certificates cost little and might be investigated."

DECEMBER 1946 MEETING

The Agricultural History Society met with the American Historical Association and other historical societies at the Hotel Pennsylvania in New York City on December 27-30, 1946. The Society's joint session on Monday morning, December 30, was devoted to the reading and discussion of four papers: "Elkanah Watson's Promotional Activities on Behalf of Agriculture," by Hugh M. Flick, New York Division of Archives and History; "Progressive Trends in Southern

Agriculture, 1840-1860," by James C. Bonner, Georgia State College for Women; "Agriculture and the Emerging Industrial Era," by Theodore Saloutos, University of California, Los Angeles; "The American Farmer and the 'Last Best West,' 1900-1920," by Paul F. Sharp, University of Minnesota. Professor J. Orin Oliphant of Bucknell University presided. At the Society's luncheon on December 30, Mr. E. Parmelee Prentice of Mount Hope Farm, Williamstown, Massachusetts, gave a stimulating and thought-provoking address, "The World's Past and Present Needs in Relation to Agriculture."

ACTIVITIES OF MEMBERS

Dr. Russell H. Anderson, president of the Agricultural History Society in 1938-39, has assumed the directorship of the Western Reserve Historical Society, Cleveland, Ohio. During 1929-46 he was associated in various capacities with the Museum of Science and Industry in Chicago.

Dr. Herbert O. Brayer is investigating the European ramifications of the western range cattle industry in the United Kingdom and the Netherlands. He is giving particular attention to the British investment experience in western ranching and land development projects. He is also acting for the Library of Congress as director of the Cooperative Project for Research in Western Americana in Europe and is assembling much valuable data pertinent to research projects on the history of the western United States.

Professor Earl W. Hayter of Northern Illinois State Teachers College has completed a brief study of horticultural humbuggery in the Middle West.

Dr. Weymouth T. Jordan has been promoted to research professor of history at Alabama Polytechnic Institute. In this new position he teaches special courses in agricultural history, conducts research in this field, and serves as a member of the research council of Alabama Polytechnic Institute.

Mr. George F. Lemmer of the University of Missouri is writing a biographical study of Norman J. Colman, the first Secretary of Agriculture. The emphasis is on Colman's contributions as an agricultural journalist and a promoter of organizations for the improvement of agriculture.

Professor Wendell H. Stephenson of Tulane University who was president of the Agricultural History Society during 1940-41 has been appointed by the executive committee of the Mississippi Valley Historical Association as managing editor of the *Mississippi Valley Historical Review* to succeed the late Professor Louis Pelzer. Professor Stephenson was managing editor of the *Journal of Southern History* during 1935-41. Professor Fred C. Cole who served as editorial associate on the *Journal of Southern History* will serve in the same capacity on the *Mississippi Valley Historical Review*.